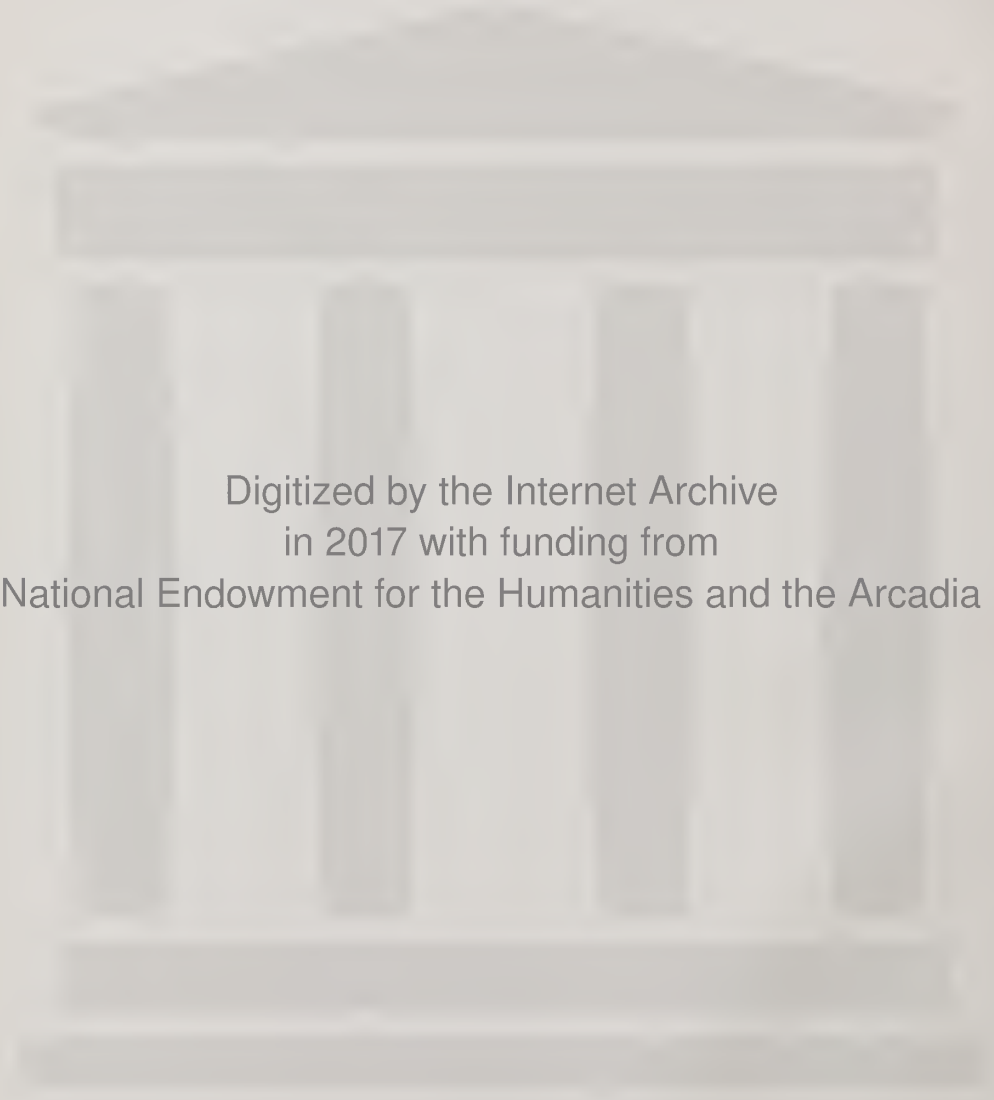


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INDEX

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A PAGE

Accomplishments of Legislative Committee....517
Acrodynia, A. Fred Watts, M.D., Creston....291
Additional Service to Society Members....129
Agranulocytic Angina, Frank H. Reuling, M.D., Waterloo....177
Aids in Diagnosis, from the Ophthalmologist's Viewpoint, Charles C. Walker, M.D., Des Moines....162
Allergy: Hay-Fever and Eczema, Zella White Stewart, M.D., Iowa City.... 72
A. M. A. Questionnaire to County Secretaries....135
American Association for the Study of Goiter....139
American Board of Obstetrics and Gynecology....314
American College of Physicians....637
American College of Physicians to Meet in San Francisco, 1932....309
American Proctologic Society Meets in Philadelphia....259
Anesthetic in Tonsil and Adenoid Operations, The, John E. Stansbury, M.D., Cedar Rapids....227
Angina Pectoris, Fred M. Smith, M.D., Iowa City....352
Announcing a Series of Special Articles on Coronary Diseases.311
Annual Christmas Seal Sale, The....635
Annual Meeting of Iowa Public Health Association....124
Annual Session, May 4, 5, 6, 1932....588
Annual Session of the American Public Health Association..315
Annual Session of the Women's Auxiliary of the Iowa State Medical Society....319
Anterior Poliomyelitis, Howard J. Hartman, M.D., Waterloo..444
Appendicitis in Children, Albert H. Montgomery, M.D., Chicago....103
Are Case Reports Routine?....634
Are We Facing Social Control of Sickness Treatment?....254
AUTHORS—
Abbott, Walter D....241, 454
Albright, George C....156
Auner, Jay F....657
Bates, Maurice T....122
Beye, Howard L....533
Bisgard, J. Dewey....68, 446
Blum, David M....563
Brown, Preston T....679
Budd, J. W....186
Burcham, Thomas A....601
Cahill, John A....549
Cogley, J. P....665
Cooper, Clark N....119
Dahl, Harry W....601
Davidson, T. E....332
Dean, F. W....216
Dolan, H. F....506
Dunn, F. Lowell.... 26
Dyson, James E....300
Ely, Frank A....675
Epley, C. O....540
Fay, Temple.... 1
Floyd, Mark L.... 27
Foster, W. H....233
Fresk, Evelyn....241
Gittins, T. R....209
Glesne, Otto N....117
Glomset, Daniel J....220
Grimes, Eli....108, 500
Habenicht, Mae....608
Hansmann, G. H....186
Hartman, Howard J....444
Hennessy, A. V....237
Hennessy, M. C....623
Herrick, John F.... 63
Hill, Christine Erickson.... 24
Hill, James C....615
Hopkins, Clarence W....552
Hornaday, William R....114

PAGE

Hough, Frank S....350
Howard, Campbell P....425
Howland, Charles F....174
Hullsiek, Harold E....279
Hullsiek, Richard B....284
Katherman, Charles A....550
Kelly, Dennis H....495
Kessler, James C....249
Knowles, Fred L....547
Kretschmer, Herman L....336
Lamb, Harry H....230
Lanpher, Howard A....346
Larsen, W. W....672
Lee, H. P.... 84
Luginbuhl, C. B....329
Mackenzie, George W....477
Malamud, William....80, 489
McClintock, J. T.... 27
McNamara, F. P....180, 556
Mengert, Wm. F....567
Milgram, J. E.... 29
Montgomery, Albert H....103
Moran, T. A....295
Neubert, A. D....597
Neuhaus, George E....438
Nielson, Arthur L....670
Parker, Robert L.... 15
Paul, W. D....119
Pierson, Lawrence E....676
Rathe, H. W....222
Reuling, Frank H....177
Rhoads, Paul S....443
Rohlf, William A....273
Ryan, Charles....662
Sanders, W. E....510
Schultz, A. A....275
Smith, Channing G....274
Smith, Fred M....119, 287, 304, 352, 457, 513
Smith, Harry L....173
Smith, Lawrence D.... 77
Stansbury, John E....227
Steelsmith, D. C.... ...31, 87, 125, 188, 252, 302, 351, 456, 512, 539, 570, 627, 684
Stevenson, Walter....343
Stewart, Zella Wbite.... 72
Taylor, Charles F.... 66
Taylor, James F....606
Thorburn, O. L....167
Thornton, John W....448
Throckmorton, Tom B.... 55
Walker, Charles C....162
Watts, A. Fred....291
Williams, Frank L....571, 628
Willius, Fredk. A.... 21
Wolcott, W. Eugene....543
Woods, Andrew H....485, 591
Wurtzer, Ezra L....341

Auxiliary News....202, 319, 417, 468, 523, 583, 643, 695
Axial Myopia: Phases of Etiology and Treatment, F. W. Dean, M.D., Council Bluffs....216

B

Benign Polypi of the Colon and Their Relation to Malignancy, Harold E. Hullsiek, M.D., St. Paul....279
Birth Injuries, Christine Erickson Hill, M.D., Council Bluffs.. 24
Blind and Deaf-Mutes in the United States....678
Brann Opens Exclusive Pharmacy....321
Bureau of Publicity, A....473

C

Cancer Commission of the California Medical Association....365
Cancer Control....193
Cancer Problem, The, A. V. Hennessy, M.D., Council Bluffs..237
Carcinoma of Ileum, Otto N. Glesne, M.D, Fort Dodge....117

PAGE

Carcinoma of the Cervix, Radium Treatment of, Preston T. Brown, M.D., Iowa City....679
Care of the Indigent Sick by Medical Society Contract, Robert L. Parker, M.D., Des Moines.... 15
Case of Gonococcal Pyelonephrosis, A, H. P. Lee, M.D., Iowa City 84
Case Reports 26, 122, 300, 350, 454, 510, 567
Cataract Surgery, Newer Methods In, Walter Stevenson, M.D., Quincy, Illinois 343
Central Neuropsychiatric Hospital Association....686
Certain Collection Agencies Approved by Medical Economics Committee 194
Changes of Address 418
Changing Conceptions of Health Work, Our....362
Chest Clinics Held 259
Childless Marriages 460
Chiropractors and Osteopaths Recognized 39
Chiropractor Given Workhouse Sentence 313
Chronic Mastoiditis, George C. Albright, M.D., Iowa City....156
Chronic Renal Tuberculosis, Herman L. Kretschmer, M.D., Chicago 336
Clinical History and Pathologic Observations in a Case of Systemic Blastomycosis, Clark N. Cooper, M.D., Iowa City 119
Coffey-Humber Cancer Cure Controversy, The....312
College of Medicine, State University of Iowa.... ....27, 80, 119, 186, 249, 679
Commitments to University Hospital, Handbook on....463
Committee on Constitution and By-Laws Provides Council Redistricting 133
Committee on Medical Education and Hospitals, On the Report of the 576
Community Health Day....260
Complications of Peptic Ulcer, James C. Hill, M.D., Newton..615
Complications of Peritonsillar Abscess, The, W. H. Foster, M.D., Clinton 233
Conference on Child Development and Parent Education....258
Consultants of the Committee on the Costs of Medical Care....315
Control of Canned Foods, The....687
Cook County Hospital Clinics....266
Cooperative Plan for Meeting the Present Economic Stress....637
Corn Sugar Released from Ban.... 36
Coronary Artery Disease, Fred M. Smith, M.D., Iowa City....304
Coronary Disease—Treatment, Fred M. Smith, M.D., Iowa City 513
Coronary Occlusion, Fred M. Smith, M.D., Iowa City....457
Coronary Thrombosis, H. W. Rathe, M.D., Waverly....222
Correction 569
County Medical Society Officers....Adv. page xxiii, April
County Society Officers Conferences Held in Councilor Districts 692
Court Enjoins Norman Baker of Muscatine....128
Crime Commission Recommends Psychiatry....569

D

Dallas-Guthrie Auxiliary Meeting 319
Dead Human Bodies, A Survey of the Law Concerning, David M. Blum, M.D., Des Moines....563
Death Notices 47, 97, 139, 203, 266, 321, 418, 470, 525, 584, 645, 698
Death Rate in Iowa Increases, The....520
Dehydration in Epilepsy—Preliminary Report, Walter D. Abbott, M.D., Des Moines, and Evelyn Fresk, B.S., Des Moines 241
Dermatological Clinic, Jay F. Auner, M.D., Des Moines....657
Des Moines Prepares for the Annual Session....154

PAGE

Diabetes Mellitus—Case Report, F. Lowell Dunn, M.D., Omaha 26
Dick Methods in the Control of a Scarlet Fever Epidemic in Waterloo, Iowa, The Use of the, Paul S. Rhoads, M.D., Chicago 443
Diets for Infants and Children....129
Differential Diagnosis and Treatment, Head Injuries, Clarence W. Hopkins, M.D., Chicago....552
Digitalis Delirium with Colored Vision: Report of One Case, Harry L. Smith, M.D., Rochester....173
Digitalis Intoxication, John W. Thornton, M.D., Lansing....448
Discussion of Certain Features of Cardiac Therapy, Fred M. Smith, M.D., Iowa City....287
Doctor Bierring Honored by Colleagues....195
Doctor Ruth—The Surgeon 35
Dr. and Mrs. D. W. Smouse Honored by Des Moines.... 86
Dr. D. C. Steelsmith State Health Commissioner.... 91
Dr. Frank L. Williams Awarded New Citation....520
Dr. Franz Haslinger Coming to Des Moines....194
Dr. Griswold Goes to New York....687
Dr. Hendricks Heads Washington Health Unit....468
Dr. Lowell Dies in Washington.... 86
Dr. M. A. Armstrong of Newell Member of Nominating Committee 704
Dr. McLaughlin's Public Health Survey Approved by Council 91
Dr. Rohlf's Birthday Clinic 100
Dr. Ruttin to Give Clinics....678
Dr. Scammon Returns to the University of Minnesota....626
Dr. W. W. Beam Completes Fifty Years of Practice....366
Drs. Coffey and Humber Denied Clinic Privilege in New York State 365
D. W. Smouse Opportunity School Opens....312

E

Early Diagnosis Campaign, The....200
Eastern District, Woman's Auxiliary to the A. M. A.... 90
Ectopic Pregnancy, A Study of the Incidence and Symptoms of, M. C. Hennessy, M.D., Council Bluffs....623
Eightieth Annual Session, The....310
Empyema with Perforation of Diaphragm and Stomach, James E. Dyson, M.D., Des Moines....300
Erskine Author of X-Ray Book....366
Europe for Study and Pleasure....126
Evaporated Milk for Drought Relief....269
Examiner Recommends Closing of Radio Station KTNT....192

F

Factors that Prolong Labor, Some, James F. Taylor, M.D., Sioux City....606
Family Doctor, The....466
Family Doctor and The Specialist....189
Fifteenth Annual Clinical Session of the American College of Physicians.... 89
Foreign Bodies in the Air and Food Passages, T. R. Gittins, M.D., Sioux City....209
Forerunners of Sickness Insurance....311
Four Cases of Progressive Jaundice with Necropsy Studies, F. P. McNamara, M.D., Dubuque....180
Fractures of the Foot and Ankle, C. O. Epley, M.D., Spirit Lake 540
Fractures of the Hand and Wrist, John A. Cahill, M.D., Volga City 549
Fractures of the Hip, Fred L. Knowles, M.D., Fort Dodge...547
Fractures into the Knee Joint, W. Eugene Wolcott, M.D., Des Moines....543

PAGE

Fractures of the Shoulder, Chas. A. Katherman, M.D., Sioux City 550
Free! A Mental Hygiene Five Foot Shelf....203
Free List of Medical Motion Pictures....575
French National Committee for the Prevention of Blindness..129
Full Time County Health Unit, The....253
Functional Disorders of the Heart, Frederick A. Willius, M.D., Rochester.... 21

G

Gastric and Duodenal Ulcer Increasing....519
General Hospitals Care for Mental Patients, Many....269
Generalized Fetal Edema—Case Report, William F. Mengert, M.D., Iowa City....567
Goiter, C. B. Luginbuhl, M.D., Des Moines....329
Goiter Classification and Nomenclature....569
Gonococcal Pyelonephrosis, A Case of, H. P. Lee, M.D., Iowa City 84
Government Control of Digitalis....569

H

Handbook on Commitments to University Hospital....463
Handicapped Children's Section of the White House Conference, The, Mae Habenicht, M.D., Des Moines....608
Hay-Fever and Eczema, Zella White Stewart, M.D., Iowa City 72
Hazards in Surgery of Toxic Goiter, T. E. Davidson, M.D., Mason City....332
Headache: Problems in Diagnosis, O. L. Thorburn, M.D., Ames 167
Health Charts Issued, New....683
Hematuria, Richard B. Hullsiek, M.D., St. Paul....284
Hereditary Hypertension, Daniel J. Glomset, M.D., Des Moines 220
Hippocrates on Prognosis....206
History of Medicine in Iowa.... .....48, 98, 140, 204, 267, 322, 420, 471, 526, 585, 646, 699
Honesty in Medicine, Ben G. Budge, M.D., Ames....482
Hospital Survey, A. M. A. Report....315
House of Delegates to Meet May 12, 1931....197
Humanize the Hospital....685
Hydronephrosis, H. F. Dolan, M.D., Anamosa....506
Hypertensive Renal Disease, Daniel J. Glomset, M.D., Des Moines 33

I

Inaccuracy of the Diagnosis of Tuberculosis of Bone, Joint, Bursae, J. E. Milgram, M.D., Iowa City.... 29
Incidence of Syphilis in a General Practice, Eli Grimes, M.D., Des Moines....108
Increase in Suicide Rate in New York State....413
Increased Service Demands Higher Dues....134
Indications for the Simple Mastoid Operation, George W. Mackenzie, M.D., Philadelphia....477
Influenza Persists in Epidemic Form.... 91
Insufficient Milk for Children.... 54
Interesting News—In Brief.... .....46, 95, 137, 202, 265, 319, 417, 469, 524, 583, 644, 696
Intravenous Pyelography, Lawrence E. Pierson, M.D., Sioux City 676
Investigate "Eye-Load" of School Children....578
Iodized Eggs....455
Iodized Oil Injection in the Diagnosis and Treatment of Sterility, W. L. Downing, M.D., and W. W. Larsen, M.D., Le Mars 672
Iowa Child Health Conference Organized....366

PAGE

Iowa Heart Association Holds Annual Meeting....259
Iowa Medical Directors Association, The....309
Iowa Physician Honored....578
Iowa State Medical Society Officers and Committees, 1931-1932 328
Is the Oviduct Open? Lawrence D. Smith, M.D., Des Moines 77

J

Joint Meeting of Health Associations.... 91
Journal Book Shelf, The.... .....51, 101, 144, 207, 270, 325, 422, 474, 530, 589, 655, 705
Journal Lancet Celebrates Its Sixtieth Anniversary....124
July Placements—Speakers Bureau....464

L

Law Concerning Dead Human Bodies, A Survey of the, David M. Blum, M.D., Des Moines....563
Laws Vitally Affecting Medical Practice, New....303
Legislative Committee, Accomplishments of....517
Legislative Obstacles in Obtaining Adequate Medical Laws...261
Leslie Dana Gold Medal Award, The....687

M

Malaria in Iowa....302
Many General Hospitals Care for Mental Patients....269
Marion County Gets Contract....321
Marriages....47, 139, 266, 418, 470, 584, 645, 698
Maryland Restricts Sale of Methanol Wood Alcohol....309
Mechanism of Pain in Peptic Ulcer, Fred M. Smith, M.D., and W. D. Paul, M.D., Iowa City....119
Medal to Dr. Martin....569
Medalists of the American Institute of Chemists....366
Medical Care of the Indigent in Iowa, E. B. Williams, M.D., Montezuma 130
Medical Clinic, A, Campbell P. Howard, M.D., Montreal....425
Medical Economics, Ezra L. Wurtzer, M.D., Clear Lake....341
Medical Economics Committee Proposes Group Malpractice Protection 199
Medical Mendicant....463
Medical Study Club, A....685
Medical Times and Long Island Medical Journal....100
Meeting of Minnesota County Secretaries....143
Metastatic Epidural Spinal Abscesses, Report on Four Cases, Frank A. Ely, M.D., Des Moines....675
Methanol Poisoning....194
Methods of Diagnosis, Eli Grimes, M.D., Des Moines....500
Michigan Legislature Recognizes Scientists, The....365
Mild and Brief Forms of Manic-Depressive Psychosis and Their Treatment, George E. Neuhaus, M.D., Omaha....438
Minutes of the Iowa State Medical Society, Eightieth Annual Session 367
Modification of Powdered Milks, The....313
Monthly Open-House Clinics at the University Hospitals, Iowa City 687
Motivation in Medical Symptomatology, William Malamud, M.D., Iowa City.... 80
Mouth Antiseptics 683
Moving Picture Featuring Diets for Children, A....203
Myxedema—Case Report, Maurice T. Bates, M.D., Yale....122

N

National Institute of Health, The....315
National Societies Honor Iowa Physicians....320
Nebraska Paper Features Iowa's Cleanup....686

PAGE

Nephrectomy—Pyelonephrosis—Case Report, Frank S. Hough, M.D., Sibley....350
Nephrology, Daniel J. Glomset, M.D., Des Moines.... 33
Nervous Indigestion, A. A. Schultz, M.D., Fort Dodge....275
Neurasthenia, Andrew H. Woods, M.D., Iowa City....485
New Addition to New York Polyclinic Medical School and Hospital 97
New Address for National Health Promotion Organizations..704
New American Journal of Cancer, The....124
New and Non-Official Remedies 269, 525
Newer Methods in Cataract Surgery, Walter Stevenson, M.D., Quincy, Illinois 343
New Film, A....136
New Health Charts Issued....683
New Laws Vitally Affecting Medical Practice....303
Newly Elected Officers of the Medical Women's National Association, The....520
New Medical School, A....460
New Officers for Iowa Medical Women....321
New Open Forum, The....311
New Physicians Licensed in Iowa....418
New Speakers Bureau Activity, A—Radio Broadcasting....689
New Squibb Building, The....473
New Tenth District Society Organized....417
New Year's Reflection, A.... 32
Non-Inhalation Anesthesia, J. Dewey Bisgard, M.D., Harlan...446
Norman Baker's Activities.... 35
North Central States, Woman's Auxiliary to the A. M. A....191
Novel Exhibit at Annual Meeting of the American Medical Association 366
Nursing, A Round Table Discussion on....187

O

OBITUARIES—
Bassett, Lemuel A....139
Beaver, Charles Vernon....470
Bellaire, Roy Frank....525, 652
Blaise, Theodore Thomas....321
Coldren, Cassius Milo....645
Couper, Edward Alexander....525
Crane, George Henry....266
DeWitt, Charles Herman....645
Dilts, John Joseph....203
Doolittle, John Comber....645, 653
Doran, Lyle Williams....321
Druet, Arthur Lewis....419
Edgerly, Edward Tyler....697, 702
Elerick, John Wesley....525
Fegers, Charles H.... 97
Gross, David L....697
Haerem, Hans Theodore....139, 140
Hansen, Andreas Schantz....697
Hennessy, James.... 97
Higley, Denison J....697
Hoag, Harry M.... 47
Kester, George W....697
Kime, Sarah A....697
Lowery, Oscar W....645, 703
Moershel, William 654
Pitts, Curtis Duane 470
Powell, Charles Winburn 203
Powell, Preston 139
Prentiss, Henry James....321, 324
Printz, Edward T.... 97
Raymer, Henry S....266
Ruan, John Arthur 97
Ruth, Charles E.... 47
St. Clair, Frank E. E....266
Shore, Francis Edward Victor....139
Smith, George E....266

PAGE

Sturdivant, John M.... 47
Tillmont, Charles Peter 419
Waggoner, Melancthon R. 584
Watson, Edward L....321
Williams, Robert R....419
Wilson, Maurice Edward....321
Wright, John Casey 321
Obstructing Prostrate, The, William R. Hornaday, M.D., Des Moines 114
On the Report of the Committee on Medical Education and Hospitals 576
On the Writing of Medical Papers.... 41
One Hundredth Anniversary of the Discovery of Chloroform..321
Open Forum, The....355, 579, 639, 690
Open Forum, The New....311
Opposition to Cattle Testing Trivial....255
Osteopathic Bill Defeated in Delaware....421
Our Changing Conceptions of Health Work....362

P

Papal Encyclical on Marriage, The.... 88
Periaxialis Encephalitis Diffusa, Mark L. Floyd. M.D., Iowa City 27
Pennsylvania's Committee on Public Relations....704
Peritonsillar Abscess, Harry H. Lamb, M.D., Davenport....230
Peritonsillar Abscess, The Complications of, W. H. Foster, M.D., Clinton 233
Pershing Hall Medical Memorial 97
Personal Mention 47, 96, 138, 203, 265, 320, 418, 469, 524, 583, 644, 697
Phi Beta Pi Medical Fraternity Forms Iowa Alumni Chapter..301
Physicians Desired for Government Positions.... 97
Physicians Qualified in Tuberculosis Needed....269
Poliomyelitis in Iowa in 1930, Howard A. Lanpher, M.D., Des Moines 346
Post Graduate Course in Heart and Lungs....251
Post Graduate Work in Retrospect....135
Postmortem Examinations: Their Importance and Necessity, F. P. McNamara, M.D., Dubuque....556
Postoperative Atelectasis, Thomas A. Burcham, M.D., and Harry W. Dahl, M.D., Des Moines....601
Postoperative Care, J. P. Cogley, M.D., Council Bluffs....665
Preoperative Treatment and Care, Charles Ryan, M.D., Des Moines 662
President-Elect's Address, Channing G. Smith, M.D., Granger 274
President's Address, Wm. A. Rohlf, M.D., Waverly....273
President's Message 132
President's Page 688
Prevalence of Syphilis 314
Preventive Medicine as Related to the Medical Practitioner, D. C. Steelsmith, M.D., Des Moines....539
Private Group Clinics 189
Prize Award of the American Association for the Study of Goiter 86
Problem of the Indigent Sick, The.... 97
Problem of Venereal Disease, The.... 89
Production of Proteose Toxic Fraction and the Effect of Diverting Portal Circulation Upon Its Toxicity, John T. McClintock, M.D., Iowa City.... 27
Professional Associates, Incorporated, Approved by Committee 251
Professors Mendel and Hart Advisors on Nutritional Study..269
Program Eightieth Annual Session 147
Program of the International Assembly of the Inter-State Post Graduate Medical Association of North America....521

PAGE

Prolonged Bed Rest in Tuberculosis, Chas. F. Taylor, M.D., Norton, Kansas 66
Proposal to Regulate Use of Fireworks.....511
Psychopathic Personality, Andrew H. Woods, M.D., Iowa City 591
Psychotherapy of Neurasthenia, The, William Malamud, M.D., Iowa City 489
Pyelonephrosis—Nephrectomy—Case Report, Frank S. Hough, M.D., Sibley 350

Q

Quackery and Law Enforcement.....632

R

Radiation in Pelvic Disease, John F. Herrick, M.D., Ottumwa. 63
Radio Broadcasting 689
Radium Treatment of Carcinoma of the Cervix, Preston T. Brown, M.D., Iowa City.....679
Ratio of Physicians in Iowa Average for Nation.....520
Red Squill Powders as Raticides.....455
Relationship of State Medicine and Civil Practice, Frank L. Williams, M.D., Des Moines.....571, 628
Report of Violent Injury Required by New Law.....466
Rheumatic Heart Disease, Dennis H. Kelly, M.D., Des Moines 495
Riggs Optical Company Announces New Chicago Management 97
Role of Surgery in the Treatment of Pulmonary Tuberculosis, J. Dewey Bisgard, M.D., Harlan..... 68
Ross Award Fund of America, The.....577
Round Table Discussion on Nursing, A.....187
Rural vs. Urban Health.....476

S

Schilder's Disease (Periaxialis Encephalitis Diffusa), Mark L. Floyd, M.D., Iowa City..... 27
Scott County Medical Society, Diamond Jubilee, The.....646
Secretary Discusses the 1932 Annual Session, The.....638
Secretary Wilbur Reports on Medical Costs.....321
Severe Anemia of Pregnancy, T. A. Moran, M.D., Melrose..295
Ship's Hospital Organized as Clinic.....355
Should Cod Liver Oil Be Flavored?.....704
Sight-Saving Review 251
Sigmund Freud's 75th Birthday.....691
Silas Weir Mitchell, A Man of Medicine and Letters, Tom Bentley Throckmorton, M.D., Des Moines..... 55
S. M. A. Celebrates 654
Smallpox Is Increasing 555

SOCIETY PROCEEDINGS

Adams County 523
Allamakee County 641
Appanoose County 200, 467, 523
Audubon County 43
Austin Flint-Cedar Valley Medical Society.....467, 582
Black Hawk County.....93, 581
Boone County 43, 93
Boone-Story Society 136, 317, 415
Bremer County 43, 581
Bremer and Butler Counties Joint Meeting.....93, 415
Buchanan County 93
Calhoun County 93, 263, 523
Carroll County 43, 641, 693
Cass County 415
Cerro Gordo County.....
.....43, 93, 136, 200, 263, 317, 415, 581, 641, 693

PAGE

Clarke County 136, 263
Clay County 136
Clinton County 263, 317
Council Bluffs Medical Society 318
Crawford County 263
Dallas-Guthrie County 93, 523, 641
Davis County 523
Decatur County 93
Delaware County 43
Des Moines County 43, 136, 317, 581, 641
Des Moines Valley Medical Association.....416
Dubuque County 43, 581
Fayette County 263, 693
Floyd County 581
Four County District Medical Association.....46, 695
Franklin County 93
Fremont County 200
Greene County 94, 136, 200, 317
Grundy County 201
Hamilton County 44
Harrison County 136, 693
Henry County 44, 94, 201, 415
Henry County Entertains Jefferson and Washington Societies 136
Ida County 94
Iowa County 44, 693
Iowa Heart Association 318
Jackson County 44, 317, 415, 581
Jasper County 94
Jefferson County 44, 581, 641
Johnson County.....44, 94, 137, 201, 263, 317, 415, 641, 693
Jones County 44, 694
Keokuk County 137, 317, 641
Kossuth County 137, 201, 263
Lee County 44, 201, 641
Linn County.....44, 94, 137, 201, 263, 317, 581, 641, 694
Louisa County 467, 642
Lucas County 642
Madison County 415, 582
Marion County 44, 263, 415, 642
Marshall County.....44, 94, 201, 264, 317, 694
Mills County 94, 416
Mississippi Valley Conference 468
Monona County 137, 201
Monroe County 264, 416
Muscatine County 94
Northeastern Iowa Medical Association.....467
Northwest Iowa Medical Society.....318, 695
Osceola County 45
Page County 45, 137, 264
Palo Alto County 416, 694
Plymouth County 45
Pocahontas County 94, 582
Polk County.....45, 94, 137, 201, 264, 318, 416, 582, 642, 694
Pottawattamie County 318, 694
Poweshiek County 45, 137, 264, 416, 582
Scott County 94, 137, 201, 264, 318, 523
Scott County Seventy-Fifth Anniversary.....642, 694
Sioux County 45, 467
Sioux Valley Eye and Ear Academy.....695
Sioux Valley Eye, Ear, Nose and Throat Society..... 95
Sioux Valley Medical Society..... 95

PAGE

Tama County....45, 416, 642, 694
Taylor County....137
Tri-County Medical Society....318, 695
Twin Lakes District Medical Society....417
Upper Des Moines Medical Society....46, 467
Van Buren County....318
Washington County....45, 94, 201, 264, 416, 582, 642
Waterloo Medical Society....319, 417, 583
Wayne County....95
Webster County....45, 202, 264, 582, 642 695
Winneshiek County....95, 467
Woodbury County....46, 137, 264, 318, 643, 695
Worth County....643
Wright County....95, 643
Some Factors That Prolong Labor, James F. Taylor, M.D., Sioux City....606
Southern District Woman's Auxiliary to the A. M. A....256
Speakers Bureau Activities....40, 92, 135, 198, 260, 316, 414, 464, 580, 640, 689
Special Issue of the Radiological Review....194
Spinal Anesthesia in General Surgery, A. D. Neubert, M.D., Fort Dodge....597
State Health Commissioner's Page, D. C. Steelsmith, M.D., Des Moines....31, 87, 125, 188, 252, 302, 351, 456, 512, 570, 627, 684
State Society Costs....461
State Society Iowa Medical Women....153
State Society Services....356
Study of the Incidence and Symptoms of Ectopic Pregnancy, M. C. Hennessy, M.D., Council Bluffs....623
Summary of the Transactions of the House of Delegates at Its Special Session....37
Summer Training for Teachers in Sight-Saving Methods....314
Suppurative Choroiditis of Endogenous Origin, Charles F. Howland, M.D., Des Moines....174
Surgical Clinic, A, Temple Fay, M.D., Philadelphia....1
Surgical Clinics, Howard L. Beye, M.D., Iowa City....533
Survey of the Itinerary, A....127
Survey of the Law Concerning Dead Human Bodies, The, David M. Blum, M.D., Des Moines....563
Swedish Physician Writing on "Death and the Doctor"....511
Symmetrical Scleroderma Associated with Metastatic Calcinosis, James C. Kessler, M.D., Iowa City....249
Symposium on Fractures....540

T

PAGE

Taxes and Indigents in Iowa, E. E. Munger, M.D., Spencer....131
Tenth District Society Organized, New....417
Third Congress of the Pan-American Medical Association....193
Third Year Added at University of Southern California....266
To Investigate "Eye-Load" of School Children....578
Transactions, House of Delegates, Iowa State Medical Society, Eightieth Annual Session....369
Trichinosis....128
Twentieth Annual Medical Clinic, November 20 and 21, University Hospitals, Iowa City....575

U

Unattached Tumors from the Embryonal Urogenital Apparatus, G. H. Hansmann, M.D., and J. W. Budd, M.D., Iowa City....186
Unauthorized Magazine Solicitor....266
Undulant Fever Meningitis—Case Report, W. E. Sanders, M.D., Des Moines....636
University Department of Health, The....636
U. S. Civil Service Examinations....654, 683
Use of Pituitrin in Incomplete Abortion, Arthur L. Nielson, M.D., Harlan....670
Use of the Dick Methods in the Control of a Scarlet Fever Epidemic in Waterloo, Iowa, The, Paul S. Rhoads, M.D., Chicago....443

V

Vacations in Canada....313
Vasomotor Changes in Parkinsonism—Case Report, Walter D. Abbott, M.D., Des Moines....454

W

Wellcome Foundation Medical and Chemical Research Building, The....143
William Henry Welch at Eighty....128
Winneshiek Society Advocates Public Health Nurse....516
Woman's Auxiliary, Iowa State Medical Society....153
Woman's Auxiliary to the A. M. A.—
The Eastern District....90
North Central States....191
The Southern District....256
Western District....363

Y

Your Dues Are Due....42

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A SURGICAL CLINIC

TEMPLE FAY, M.D., Philadelphia

FIRST DAY

Mr. President: One of the pleasures of being here today was the greeting extended by so many friends. I appreciate the honor, and trust that I may fulfill the requirements stressed by Dr. Oliver J. Fay relative to one who bears this name.

In this clinic, which is designed to cover the question of cerebral trauma in its more recent practical phases and the differential points of diagnosis, we shall make particular reference to important examinations and the indications or contraindications for surgery.

Today we are dealing with a problem which is not alone concerned with the objective evidence of fracture of the skull, but is a problem of the physiology of the cerebral spinal fluid circulation, intracranial pressure and more particularly hemorrhage, either general or focal.

Case I (demonstrating patient): Although the fracture of the skull itself is the most evident finding, and especially the defect in the skull which is so apparent even at the present time, the most important problem is the management of the acute and chronic intracranial pressure consequent to the injury. The history in this case was that in 1927 while driving a car, the patient turned over and sustained a severe head injury. There was a large flap of the scalp torn loose over the left temple region and a compound comminuted fracture of the skull. I do not know whether it is possible for you to view the actual area. Apparently the scalp had been torn. It appears as though an excellent piece of surgical plastic work had been done to replace the scalp over a large area. The bone defect, as you see, measures 4 c.m. by 5 c.m. and is quite extensive.

The fourth week following the accident, the patient was able to be up and about. The wound continued to drain until January of 1928, approximately six months. A small piece of dead bone was removed at that time and drainage continued until April, 1928, or for nine months, and then closed in the summer of 1929, a piece of gravel the size of a wheat kernel coming through the scar. Immediately following the accident he had paralysis of the right side of the face and deafness in the left ear.

The history says the right side of the face, and that is a very important differential point of diagnosis. At the present time the patient has paralysis of the left side. You see not only the incomplete paralysis and weakness of the lower third of the face, which may or may not be cortical in origin, but also paralysis in closure of the eye and wrinkling of the forehead, which indicates, of course, that we are dealing with a peripheral type of lesion. On the other hand, in this case one must discount the possibilities of paralysis because of the scar cutting over the frontalis muscle. The weakness in the closing of the eye is quite evident, however, and even though the scar of the scalp runs to the eyebrow, that does not include the orbicularis oris branches that come to the eyelids. Therefore this is in all probability a left peripheral seventh, or facial paralysis. He may well have had a right facial weakness of cortical type at the time of the injury because there is a wound on the left side, very close to the motor area which supplies the right side of the face.

In a cortical type of paralysis, however, there is no involvement of the frontalis and slight, if any, involvement of the eye. Closure of the eye is possible even in the presence of a cortical paralysis, so we must trace the residual paralysis to something which is distant even from the point of injury. I think if you look very carefully and test the sixth nerve you will find there is still slight weakness of the left sixth. That helps to confine the injury to the peripheral seventh on the left. So in this case, whether the x-ray shows the fracture or not, we undoubtedly have not only the defect which is quite evident in the left frontotemporal region on the film and which in the patient is objectively demonstrable, but we have had a fracture through the base, probably in the petrous

bone involving the seventh and eighth nerves and probably at the apex of the petrosa involving the sixth as it passes on the left side.

This patient complains at the present time of dizziness and faintness. It may occur while walking, especially on hot days. It does not happen if he is sitting down or driving his car. His blood pressure is 104/72. Hearing in the right ear is normal for both air and bone conduction. In the left ear, air conduction is lost and bone conduction is markedly reduced. Usually in these cases we have the posttraumatic symptom complex of headache, loss of attention, depression, dullness, dizziness, memory failure and general ill-defined malaise which we have been prone to term neuraesthenia, posttraumatic neurosis, hysteria, malingering and a host of other unsatisfactory classifications.

Most of these cases demonstrate encephalographically actual brain damage that is extensive enough to account for the symptoms, but in the question of vertigo one must not overlook the actual presence of small hemorrhages in the petrous bone itself, which injure the vestibular and cochlear mechanisms. A fracture through the base may directly impair the function of hearing and the semicircular canals. In many cases actual hemorrhages have been demonstrable in the vestibular system within the semicircular canals.

Many of the symptoms manifested after injury, however, are due to chronic intracranial pressure. The physiology of the cerebral spinal fluid circulation is something comparatively new. We are indebted to Weed, of Johns Hopkins for opening the door to this profound and fundamental study, as well as for an understanding of the mechanism of this problem. Weed determined several things which have been of great value. In the first place, he showed that *hypotonic* fluids (that is, fluids under the normal saline equivalent), when introduced either by mouth, vein or otherwise, are rapidly absorbed into the blood stream with a subsequent elaboration of cerebrospinal fluid. Within two minutes following the introduction of a hypotonic solution intravenously in those animals where he had removed a section of the skull, the brain began to bulge and the manometric readings showed a rapid rise in intracranial pressure. We probably have no realization of what the ordinary consumption of hypotonic fluid or tap water is per day in these posttraumatic patients.

There is an increased cerebrospinal fluid production in the normal as well as in the pathologic case following the ingestion of hypotonic solution. Ordinary tap water remains in the gastro-intestinal tract only a short time as it is rapidly absorbed into the vascular system, and as soon as that shift occurs in the blood compartment, there is a compensation from the standpoint of the kidney to maintain a more or less fixed blood volume. Almost at once there appears additional fluid in the cerebrospinal fluid system as well as the interstitial compartment throughout the body. It is evident that the elaboration of additional fluid within a closed cavity such as we have in the skull means that something must give way before it or pressure rapidly ensues. In the abdomen where we have ascites, or in the leg where we have edema, there is a possibility of expansion and swelling of the walls and tissues. Thus, in a normal person the ordinary ingestion of fluids day by day is compensated for because with the elaboration of the new fluid, there can be rapid elimination of the fluid already present, as well as temporary pressing out of blood from the large venous sinuses, with no untoward symptoms.

The shift of volume relationships in those cases where trauma has disturbed elimination of fluid is most important because, as Weed and Bagley have shown, the presence of red blood cells in the spinal fluid immediately obstructs this system of drainage. We may now have an obstructed system within the skull, fluid being elaborated but not sufficiently eliminated, the outcome being an increased pressure and physiologic loss of function of the brain when pressure or ischemia (anoxemia) becomes marked. We see this in the dull, drowsy, stuporous state that follows trauma or hydration. In any type of cerebral edema, in any hydrated state, we may find irritability, delirium and convulsions, or we may find dullness, stupor and coma, associated with other clinical symptoms. We know that cerebral dehydration is necessary to relieve these symptoms. They do not play a true part in the disease with which they are associated, but represent a symptom complex of increased intracranial pressure and cerebral edema. Eclampsia and uremia are typical instances wherein acute toxic states favor water retention through kidney deficiency. To remove the cerebral pressure and the fluid is to remove the symptom complex.

In order to escape from the closed system within the skull, cerebrospinal fluid finds its outlets through the subarachnoid villi and pacchionian bodies, around the large cerebral veins and particularly the longitudinal sinus. Fremont-Smith has called attention to the fact that this fluid is a dialysate and that in its protein content it resembles any interstitial (edematous) fluid of the body. It is a filtrate rather than a secretion, the fluid simply passing through a membrane from the vas-

cular side into the subarachnoid space. As you increase the fluid intake in a patient, therefore, you are promptly elaborating fluid within the closed box of the skull, provided the patient is not dehydrated, and if compensation for this added volume is not forthcoming, symptoms of pressure will shortly ensue.

The question arises immediately, supposing we do have bloody spinal fluid which is directed toward and carried to these very fine filters, which may be likened to the filter in a sink. The process is similar to coffee grounds draining down the sink. Red blood cells simply stop up these filters, not only for the time being, but for a period of eight to ten days following trauma. It takes nature approximately seven to ten days to hemolyze this blood. During this period, there is an intense reaction of the arachnoid, the covering of the brain. In the filters themselves there is an intense, swollen, edematous condition. It resembles in some of the hydrated states the picture you would get in an acutely cloudy, swollen kidney.

The kidney is in a sense a filter mechanism, as is the cerebrospinal fluid system. Strangely enough, Fremont-Smith showed that the analysis of this fluid corresponded to that of glomerular urine, with regard to the protein content as found by Werne and Richards. He therefore drew the conclusion that we have a fluid which is a blood plasma dialysate in this system within the skull similar to the renal system in the glomerulus. We have a constant production and elimination of cerebrospinal fluid. The only difficulty is that it is within a closed system and we cannot see it. Anyone can predict the results of obstruction of the ureter, the bladder or the urethra, and with the damming of fluid and the production of more fluid you would get exactly what you would expect, a hydronephrosis, or at least great dilatation of the bladder, and dilatation of the ureter behind it. In a similar way we get types of internal and external hydrocephalus, depending upon where the block occurs. All of us know the cause of the internal hydrocephalus, since it is easy to see the block to the ventricles.

This lantern slide shows a skull defect not otherwise visible, which is present primarily because this was a compound comminuted fracture. I will now show you the result, fifteen years after the injury, of the failure of the fluid to be eliminated from the brain surface. The fluid has been replaced by air, a method known as encephalography, developed by Dandy of Baltimore and elaborated by the German school. Refinements in technic of the procedure have been developed by Pendergrass in America, and by his method it is possible to visualize this brain under the stereoscope by replacing the fluid with air. This is a perfectly safe, practical procedure provided that a careful study of the case has shown no block of the ventricular system itself, or other contraindications. With the proper roentgenogram we can see the brain as clearly as though we held it in the hand.

In this present case, the patient having been operated by the decompressive method fifteen years ago, you will note the marked loss of brain and gross shrinkage. This has been replaced by fluid, and then the fluid mechanically withdrawn and replaced by air. Note here the ventricular system. Note the great collection of air which is not normal. Here you can actually see the pons of the brain, the cisterna chiasmatica, the optic chiasm, and the thalamus. Here, if you look carefully, you can see the aqueduct of Sylvius and this is the fourth ventricle.

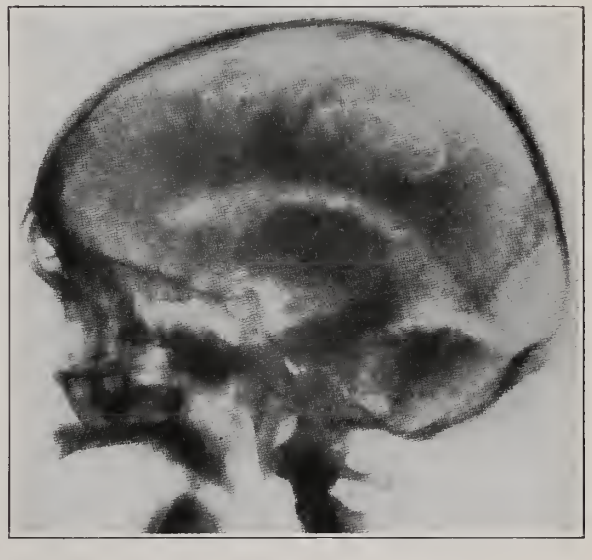


Fig. A—Widespread pressure atrophy over the frontoparietal area, occurring fifteen years after severe cerebral trauma. Note the "decompression" made by the surgeon at the time of injury, for relief of pressure. The patient had bloody spinal fluid but no demonstrable clot. At the present time there are symptoms of headache, dullness, nervousness and, recently, several convulsive seizures. The patient is maintaining his position as a United States postal employee at the present time. There were no objective neurologic signs indicating an organic lesion of the brain.

This man shows at once large widespread cerebral atrophy and very definite cerebellar atrophy. What do we find clinically? No symptoms whatever of an objective type. Why? It is one of the strangest things in neurology, that we may have tumors of extreme size, we may have areas of brain which are destroyed, and yet it is difficult indeed to find symptoms unless those areas are concerned with specific function, especially the motor or the angular gyrus region. As you see, the ventricular shadows here are equal and sym-

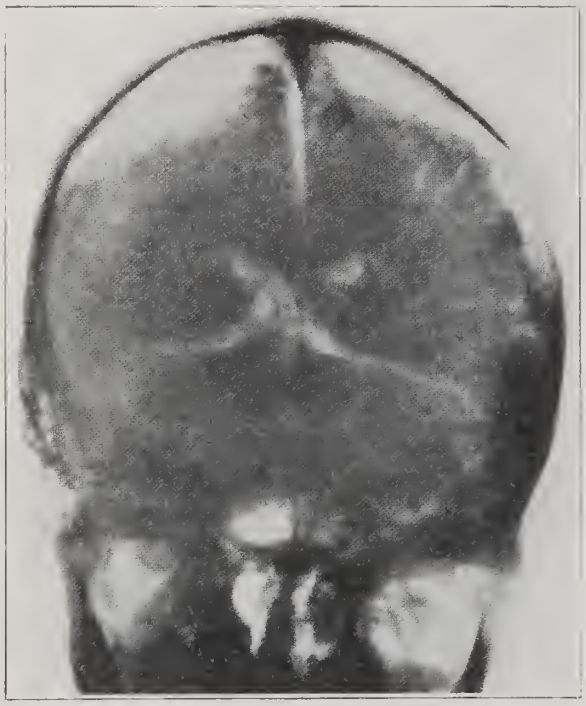


Fig. B—Anteroposterior view of the same patient as in figure A, showing the bilateral widespread cortical atrophy and shrinkage of the brain. Note the area of "decompression" in the skull. The winglike air shadows are due to dilatation of the cisterna venae magnae cerebri over the superior surface of the cerebellum. Attention is directed to the interhemispheric air and the longitudinal sinus.

metrical. There is actual brain shrinkage. Notice here the pacchionian bodies that line the longitudinal sinus, and there you see your triangular longitudinal sinus. Notice that these bodies are tied closely to the longitudinal sinus, the brain hanging almost from the dural attachments.

Winkelman has been spending the last three years in a study of the pathology of these filter mechanisms. Strangely enough they have not claimed the attention of the profession since the work of Key and Retzius in 1876; aside from an occasional tumor report there has been no systematic study of these little strictures which Weed has shown to be so important. The injury of the brain, as you see, is symmetrically bilateral. It is not a question of the point of injury as we have formerly thought or the focal lesion being the actual cause of the atrophy, but it is a bilateral symmetrical damage to the brain which comes on, due, we believe, to hydraulic pressure. Hydraulic pressure is as true a force as the pressure of an elastic bandage wound tightly around the hand or the leg. If the arm or leg be placed in a snug fitting plaster cast or elastic bandage for a period of a week or ten days, when you remove it you find a very definite atrophy. It is not only the atrophy of disuse.

By careful study Dr. Winkelman found that these pacchionian bodies contain spinal fluid, which is elaborated for the most part within the ventricular system itself, and then finds its way around the pons to the cisterna chiasmatis. From this point the fluid finds two possible pathways to the cortex, the fissure of Sylvius and the midline. The point of major absorption is at the vertex. Weed has shown that the major portion of this fluid elaborated within the ventricles escapes through the subarachnoid villi, which are in great preponderance situated from the frontal to the parietal lobes along the midline adjacent to the longitudinal sinus. A small amount of fluid does find its way out along the cranial nerve roots and into the spinal canal. We can readily understand what it means to have a cerebellopontile angle in which we have a block of the fluid getting up toward the vertex. The fluid can get out of the ventricle and down the spinal canal, but still there is not sufficient absorption to prevent intracranial pressure. Dr. Winkelman has found after diffuse subarachnoid hemorrhage, fibrosis and destruction of the filters. After birth trauma, especially with the overriding of the parietal bone, we find damage in that very area. In the meningitic groups we find these structures packed with white cells; in the luetic group, marked infiltration.

As age advances, we find the degenerative type of filter. This same type of cerebral shrinkage is present in the late stages of senile dementia. We find this same typical symptom complex with the beginning loss of memory and the beginning loss of attention, and the frontal and parietal areas gradually involved, so that as old age approaches the senile type of brain atrophy develops. This atrophy, as Winkelman has shown, is the same atrophy that Hassin of Chicago described beneath solid brain tumors and the same atrophy that occurs in severe brain trauma. It is a real pressure atrophy, yet no one has apparently accounted for the mechanism of the pressure. The atrophy is confined to this area of the brain; it is not confined to the occipital or temporal lobes. We are dealing with something superadded, that is, an hydraulic cast.

When we consider the skull as a "closed box" the addition of a small amount of fluid (10-15 c.c.) either from the standpoint of increased production or the failure of elimination, then we have a contest between circulating blood and cerebrospinal fluid pressure. As cerebrospinal fluid increases in volume it will squeeze blood out of the venous channels, and then there comes a point where there is a break in physiologic continuity of the mechanism, due probably to lack of oxygen. The cerebral cortex requires a large amount of oxygen. The

cells cannot survive eight minutes following their complete loss of oxygen. After thrombosis we know of the sudden loss of function due to circulatory interruption. If we can get circulation back with sufficient oxygen we may get a return of function. If that cell or those areas are devoid of circulation for a period of eight minutes or more, there is no possible return, even though you do get your circulation back. We are thus dealing with a conflict between increasing cerebrospinal fluid and the consequent expression or pushing out of the venous blood from within a closed space. The time comes when pressure similar to that which you might make on your finger nail produces a period of ischemia.

Forbes and Wolf of Boston, by placing a glass window in the skull, have observed a very important phenomenon. As intracranial pressure was increased and this period of ischemia occurred, so they could see, and, by taking microphotographic moving pictures compare the size of the vessels from moment to moment as well as determine the intracranial pressure, by manometer, carefully correlating the blood pressure, they found when the period of pressure reached the stage when cerebral anemia began, that the capillary has no defense against this type of pressure. An immediate rise in systemic blood pressure occurs in order to maintain sufficient circulation to continue oxygen.

We must realize when we treat these patients with severe head injuries, that from the time of their admission they have a defective cerebrospinal fluid drainage mechanism if there is blood in the spinal fluid. The estimated quantity of spinal fluid produced per day may be as little as 30 c.c. and in some instances has been observed to be as high as 700 c.c.'s, in cases of cerebrospinal rhinorrhea. It is difficult to say what the actual production is because of the influence of age and also because of the variable fluid factors involved, but we may safely assume that it is between 30 and 70 c.c.'s per day in the adult. If there is no possibility of this fluid escaping, or if only a very small portion of it can escape, we cannot permit this amount of fluid to be formed, because if we do, the brain is placed in an hydraulic cast over the frontal to the parietal area. That cast is more perfect than any that we could devise, and is similar to the principle of the four-wheel brakes on the automobile, the principle of the hydraulic press and hydraulic elevator, and the laws of hydraulics apply. "Pressure exerted at any point within a closed fluid system is equally distributed to all points in the system." That means every cough and every strain, every change in pressure even at a distance is registered throughout this hydraulic field and stamps its effect on this particular area of the brain. Normally we find no fluid pathways in the occipital or temporal regions. We do not find this atrophy in those areas, no matter what the cause.

These individuals with the hydraulic cast or the fluid cast under pulsating pressure gradually develop a low grade type of ischemia, which as Dr. Winkelman can show you under the microscope, represents the falling out of the ganglion cells and, secondly, the change in white matter, or as we see here, the actual shrinkage of the brain. With the shrinkage of the brain not only is the fluid volume and area increased, but it gains in effectiveness, for as the surface area of fluid increases we have an increase in the application of the force.

We feel today that posttraumatically the fracture of the skull does not concern us. From a surgical standpoint we produce many fractures of the skull, and if we are careful in the physiologic problem of hemorrhage and pressure there is no untoward effect. The fracture of the skull is not the determining factor; it is the pressure mechanism which follows the hemorrhage. The hemorrhage in the subarachnoid space is not operable. Furthermore, if you have bloody spinal fluid, that hemorrhage is universal on both sides of the brain. The problem in these cases is to attempt to remove as rapidly as possible the red blood cells which are obstructing the filter and producing a reaction of the arachnoid. In spite of the arguments we hear today against lumbar puncture, there is no other possible way to do it than by frequent spinal drainage, two or three times a day. If you can remove the blood, you cut down the period of reaction. During that time you must be careful not to overload your subarachnoid space with fluid. This means that you must control the fluid intake permitted the patient. To *control* it means to give him *only the quantity of fluid which is physiologically necessary to carry on his pulse and his general tissue metabolism,* because you cannot permit him any fluid in excess, otherwise you develop a cerebral hydraulic cast.

Too often are we misled with the idea that because we find atrophy fifteen years after an accident, it has required fifteen years to develop. Since we have been doing these encephalograms on patients we have found that atrophy occurs within three weeks after trauma, and within three weeks after birth injury, and therefore we are beginning to be conscious of the fact that this hydraulic cast is set during the early hours after the trauma. Too frequently the surgeon treats his trauma case, and must rightly do so, in the

period of shock with large amounts of fluids. It is true that he overcomes the shock by the introduction of fluid so as to make up the loss of vascular volume, but as surely as he introduces normal saline or hypotonic solution, that is, giving ordinary quantities of water by rectum or mouth, he increases intracranial volume. As he does this he presses out his vascular circulatory factor and then you see exactly what follows. The patient is dull and stuporous, he vomits, respirations are depressed, and you have a struggle to save him from cerebral edema and respiratory failure. A very prominent neurologist in New York not long ago gave a discussion on the cyclic phenomena of the medulla. He cited, I believe, twenty-two cases of army officers who had received high explosive concussions. They were unconscious for about two days and then became conscious for about twenty-four hours, only to return to a period of unconsciousness. This occurred cyclically, for nine to twenty-one days in that group. We asked the question: "What did you do when they were conscious? What did you feed them?" The answer was, "fluids and liquid diet. They had been unconscious two days."

It seemed evident that they gave them enough fluid to put them back into the period of unconsciousness. As soon as the elimination of the fluid had occurred and they became conscious the natural thing was to give them a liquid diet. "The patient hasn't had anything to eat for two days!" Give him all the fluid he wants and you have him back in a stupor very promptly.

Patients on a restricted fluid intake are given fifty per cent glucose by vein instead of large quantities of saline solution. This is a hypertonic solution, the value of which was called to our attention by Howe in New York and later by Max Peet of Michigan, who showed the value of glucose solution in the control of intracranial pressure. We have found Lilly's fifty per cent product to be ideal. Fifty per cent balanced glucose ready to give immediately intravenously, if given during the early stages of shock, reclaims the fluid which has gone out of the blood vessels not only into the cerebrospinal system but into the tissues throughout the body. The immediate treatment, therefore, of a case of head injury is the giving of fifty per cent glucose intravenously (an adult case, from 40 to 60 c.c.'s). This can be repeated in four hours. Your patient is in no condition for x-ray examination after cerebral injury. He is in no condition even to subject to a careful neurologic examination, because it would further produce or increase shock. Spinal puncture is out of the question for the moment. Respiration, pulse and temperature are of great importance, particularly blood pressure. All of our cases receive from 40 to 60 c.c.'s of glucose, as soon as they can get the syringe needle in the vein. It stands there ready as an emergency procedure. That is the first thing; while the nurse is taking the temperature, pulse and respiration and the blood pressure the glucose is administered. It immediately checks the physiologic phenomenon of shock.

To my mind, Richards, of the University of Pennsylvania, has given the most adequate explanation of shock in his work with Dale on the British Shock Commission. Dale and Richards found that histamin and other substances when injected intravenously produced profound shock, and that shock was characterized not as the Crile theory would lead us to suppose, by the actual pain induced, but was produced by the physiologic action of a broken-down substance from traumatized tissue. Immediately there is a vasodilatation and rapid transudation of fluid into the tissues and out onto the skin. We see it in the high pulse rate, and the demand of the heart for more volume to work against. With the fluid out on the skin surface we see it very easily. The extremities are cold and clammy. They are cold because of the rapid evaporation of the fluid from the surface. The temperature is subnormal because of the actual loss of heat by evaporation. During the period in which they are cold and clammy, the patients are generally rushed to the hospital in an open ambulance, police patrol or car, and by the time they reach the hospital they have evaporated sufficiently so that their temperature is decidedly subnormal. We reclaim the fluid that is going out into the tissues by the hypertonic solution of glucose. Richards showed that during shock there was an actual swelling, with increase of volume, in the extremities. That is, fluid left the vessels and, like edema, was out in the interstitial spaces.

The surgeon knows when he gets the fluid back in circulation that shock begins to disappear. Using fifty per cent glucose, we reclaim the fluid by making the blood stream hypertonic, that is increasing the viscosity and also the osmotic pressure of the vascular compartment, and drawing the fluid back from the interstitial spaces. Thus you are reclaiming blood volume from within the tissues. Secondly, you are depleting cerebrospinal fluid accumulation. You are checking the possibility of further production of spinal fluid, something that is very vital in the next four to six hours.

The immediate treatment therefore, is glucose intravenously, and following that, the ordinary means of checking the heat loss; that is, hot water bottles to decrease the elimination from the skin.

Too frequently the surgeon and the physician attempt to stimulate a heart in a condition of shock and true vasomotor failure. It is not the heart that needs stimulation; it is the peripheral vasomotor bed which is relaxed. We need peripheral contraction in the capillaries to give resistance against which this heart may act. Also we must have a diastolic pressure above 40, and the one object throughout your entire treatment of a trauma case must be the maintenance of this diastolic pressure above 40. Why? McCloud has shown and many physiologists have determined oxygen dissociation; that is, oxygen being carried by the red blood cell has left the cell by the time the pressure falls to 40. If it has left the cell, when you are getting a diastolic pressure of 40 in the periphery, that periphery does not represent the arms and legs alone; it represents the liver, the brain, the spleen, the entire organism. Capillaries are peripheral just the same, no matter where their location is, regarding the actual heart or the distance or proximity. So if we are dealing with anoxemia or the loss of oxygen, we might as well cut down the individual available oxygen in the room as to allow the diastolic pressure to fall below 40. Blood pressure and pulse pressure become the most important thing. As intracranial pressure builds up there may be temporary adjustment and you see it in the blood pressure mechanism, but you will notice that pulse pressure begins to rise. Why? As intracranial pressure increases and the consequent cerebral anemia occurs, with vasomotor failure (vasomotor center relaxing), down goes the diastolic pressure. The difference between systolic and diastolic pressure widens, with a consequent increasing pulse pressure. The dictum used to be that when the pulse pressure crossed the pulse rate, that was the time to decompress. That is no longer the case. We now say, *"When the pulse pressure crosses the pulse rate or tends to cross it, that is the time to dehydrate."* When treated by dehydration methods the patients are no longer stuporous beyond the eighteen-hour period, no matter how severe their trauma. They have either died or they are entirely out of their stupor. Sometimes there is aphasia lasting for days, and a differential point of diagnosis regarding aphasia is important.

In the few minutes I have left I wish to show you the means of making this differential diagnosis. While the patient is actually or apparently stuporous, unless the stupor is profound, if you will press on the supra-orbital nerve you will see the same side of the face drawn up. Painful pressure over the supra-orbital will bring up violently the side of the face on which the pressure is maintained.

That is a most important point in focal diagnosis. We are asking ourselves the question, here is a patient that appears to be stuporous, and time and time again I have seen the resident or someone make a diagnosis of stupor in the patient. This man says he was unconscious for thirty minutes. The patient may be unable to speak and understand and apparently stuporous, but not really stuporous. How do you determine that? If he lies in bed, for instance, and he is dazed, perhaps, he can't understand what you say, and he cannot say anything to tell you what his symptoms are. When you produce this pressure, not only is the face drawn up on that side but even in the presence of a paralysis of the right hand or right side he will take his good hand, which is the left, and remove the painful stimulus, or attempt to do so. If he does, then he is conscious at least within this uninvolved hemisphere.

If he is not conscious, that is if he is really stuporous or greatly disoriented, he shows signs of being greatly disturbed when you produce painful pressure, he makes a movement to get away, but makes no direct movement to remove the painful force. That is one of the most important differential points of diagnosis that we have. If he makes no purposeful effort to remove the painful stimulus, but simply reacts in a general way to avoid that painful stimulus, physiologic continuity of the whole brain has been greatly disturbed or interrupted. If he isn't unconscious he is so close to it that it amounts to the same thing. If on the other hand he makes an attempt to remove the painful simulus, he is not unconscious and it may mean a focal injury to the left temporal motor area of the brain. Second, when you get the facial response, this determination is important, as it indicates that the motor mechanism is still intact, so the pressure on the supra-orbital nerve will tell you whether the facial cortex is involved. Frequently you can't get the patient to show his teeth if stuporous.

Of course the dilatation of the pupil is one of the most important signs. The laterality of a lesion is frequently determined by that factor and indicates a hemorrhage which is extra arachnoid. These are known as subdural and extradural hemorrhages, but as far as the brain is concerned it is covered by the arachnoid and the hemorrhage usually lies outside of the brain or its fluid system.

Let me call your attention to the sign called the Hoffmann sign, that of snapping the middle or ring finger nail. In a case with a lesion of the motor area; that is the upper motor neuron, a damage to

the brain or the system between the brain and the cervical cord will produce an approximation of the thumb and index finger. Many times the index finger alone moves, but when the thumb and index finger approximate, it is the equivalent of the Babinski of the upper extremity. We know in the lower extremity the Babinski is positive when the large toe goes up to plantar stimulation. Of course we recognize that its presence indicates involvement in the motor pathways or near the vertex of the brain. If we are determining whether a lesion is focal or not we are not just exposing any area of the brain at operation. We want to know if this hemorrhage is below, extending up to the temple or if it is above, extending from the midline to the temporal Sylvian area. A great deal depends upon your exact exposure. This sign is the Hoffmann sign and has proved to be of extreme value. It occurs early and represents actual involvement either through edema or pressure of the motor cortex of the hand or arm center. It is easy to pick up the Babinski reflex. The tendon reflexes which we look for are, of course, the usual ones, and unfortunately in the trauma case we frequently get variable reflex activity after trauma, but usually there is a complete absence of all reflexes during the time of the cerebral irritation. Very slight irritation of the outer aspect of the sole may give you a Babinski sign when a great deal of irritation will not. It must be carefully checked. Conditions that produce the Babinski reflex are those of pressure, hemorrhage and actual damage to the cortex. It is a loss of cerebral control temporarily or perhaps permanently. The reflex activity as far as the tendons go will not usually help you.

When you are in doubt as to which side is paralyzed and the patient is lying in bed and it often is a difficult point to determine because with profound stupor and unconsciousness where there is general relaxation, if you take the two arms and let them drop heavily to the side of the bed, holding them equally by the wrists, you will find the paralyzed side drops more rapidly and in a flail-like manner, whereas the side that is still uninvolved organically will drop but you will notice just a little delay on the still activated side. That may be a point to indicate the laterality of your lesion. Many times an individual struck on the head has the greatest damage produced opposite the point of fracture. If you are going to operate on signs of a focal fracture of the skull the chances are you will probably find later the hemorrhage on the opposite side rather than on the side of the fracture. Ambrose Paré called attention to this in 1658 in the case of King Henry III who was struck over the left eye by the truncheon of his lance. Ambrose Paré diagnosed this lesion and his book states definitely they found the yellow hemorrhagic area on the right side of the brain, as he had predicted.

SECOND DAY

In the few minutes alloted to me I am going to attempt to take you over seven years of work, and therefore it is going to be impossible to explain the details or give you reasons for our views. This work is now in the literature. Those of you who are particularly interested in the subject of epilepsy and the control of the attacks, will find in the *Journal of Nervous and Mental Diseases* (May, 1929), a full description of the methods and the work that has been done during the past fifteen years with the correlation of the scientific efforts by many hundreds of observers toward the solution of this problem.

We have been peculiarly fortunate in having that cooperation in which science alone thrives, of adequate and enthusiastic and serious thinking men surrounding us doing their part and assisting in this problem. What I am giving you this morning is purely a summary of the work of many, many investigators which has found some correlation in the laboratories in Philadelphia. This work is being carried on particularly by the Daniel J. McCarthy Foundation, with investigators now being brought from various parts of the world.

The new laboratories at Temple University are carrying on this problem and this morning we have to offer you one of the possible clinical controls of convulsive seizures. This problem is an age-old problem. You are all familiar with the prejudices that exist today. One dare not tread in this field without fear of being severely criticized or perhaps even laughed at. Nevertheless I am going to give you what, seriously, in seven years of work has appeared to us to be one of the important fundamental problems. It remains for the future to see how universal the method of control will be.

At the present time and during the past three years we have maintained a definite control in those cases which have cooperated intelligently. Others have confirmed our findings during the past two years. The cases are now running into the hundreds and the reports are becoming very satisfactory as the present methods of control are beginning to be more closely followed.

We must throw aside our prejudices. We must analyze the problem from the physiologic side. Seven years ago we began by collecting all of the observations, no matter how they clashed or dif-

fered, and no matter whether men were thrown into disrepute by procedures that had only little apparent benefit. We assumed that if a man was serious, of good standing, and had contributed something to the work, his findings were as acceptable as another's, and after we had correlated some 300 observations, many of them diametrically opposed, many of them discarded, we then sought a common denominator, because we knew there must be some truth in each method that had brought some form of relief. Strangely enough, after sorting out the possible physiologic common denominators we came to the most simple and probably the one, therefore, which had been overlooked, the matter of fluid balance.

In the history of our profession, especially in the last twenty-five years, we have learned to check diets carefully; we know calories, we know fat, protein, and carbohydrate values. We are dealing today in the vitamin content of food. We know our metabolism and our physiology to a great degree, but no one had touched on water metabolism until Gamble, in 1924, began to realize and analyze water metabolism. As Gamble points out, eighty-five per cent of body weight is water weight, and the mobility of fluids through the tissues and its effect on the physiology of the tissues is one of the most profound things in life itself. So that here was the simplest and yet most profound problem that had failed to be closely analyzed.

We are indebted, of course, to Weed, as I said yesterday, for opening the question of the physiology of the cerebrospinal fluid system. It is difficult to even comprehend this problem, and it was impossible until Weed and his co-workers and the great group of observers that have followed Weed, such as Rowntree, Kubie, Howe, Ayres, and others who have done brilliant work in this field, contributed their part. To Dandy of Baltimore, we owe the method of encephalography and ventriculography. It was not until this method became a safe, adequate procedure that it was possible to see by the roentgenogram what lies within the human skull. Unfortunately, the X-ray had shown us before only the bony conformity, and the soft tissues, of course, have had to come to necropsy before we could attain an adequate idea.

During the past ten years neurosurgery has developed to the point where it is safe to explore the brain. The older view on neurosurgery is that it is a difficult and dangerous procedure and usually attended with fatality. That is not true today. It has gone through the same stages of development that other branches of surgery have. Today we are not dealing with mechanical problems such as operating on the skull, removing a tumor, or inspecting the pathology, but the important problem has become the managing of the hemorrhage within the skull and the control of intracranial pressure, and the physiologic balance of this pressure after operation. These patients do not die from the operative procedure, neither do they die particularly of their fractured skull, as I said yesterday. They die of hemorrhage and intercranial pressure. There are two or three places in the cerebral mass you do not dare approach or disturb. We have fundamental centers situated at the base, usually in the region of the pons or in the lower portion of the ventricular floor, the subthalamic nuclei. In that area death rapidly follows disturbance of the tissue, but in the cerebral hemisphere itself and the cerebellum itself, operative procedures are now possible, provided the neurosurgeon understands the mechanism of pressure and can maintain a field free from primary or secondary hemorrhage. As the methods of technic and as the understanding of pressure become more universally accepted the mortality has gradually dropped. The neurosurgical mortality has been cut in half during the past six years, and we are hoping to get it down to within range of the general surgical mortality for the more serious operations of the abdomen. We are now content, perhaps, to feel that a twenty per cent mortality is a very high neurosurgical mortality. It used to be forty per cent. The trouble today is that we don't see many of the cases until they are almost moribund, until changes have occurred that we cannot rectify.

In the early diagnosis of these lesions of the brain lies the solution not only of neurosurgery but of the future of the patient. That is why encephalography has given us a clue when other things have failed. In a brief moment I want to sketch for you the cerebrospinal fluid circulating system as we now understand it so that you may grasp the importance of the factors with which we are dealing. Yesterday we spoke of the management of some of this pressure as far as the production of cerebrospinal fluid is concerned. We must carry clearly in mind that the major portion of cerebrospinal fluid is elaborated within the ventricular system, and as you look on the films on the view box you will see this ventricular system outlined. The major portion, of course, is elaborated through the choroid plexus, it passes out through the foramen of Monro, and through the third ventricle, the direction of the fluid being from within the ventricular cavities which you see here. In the stereoscope you can very clearly see the third ventricle. There is actually the foramen of Monro. You can see the

pathway into the fourth ventricle. Here is the fourth ventricle which you visualize at this point.

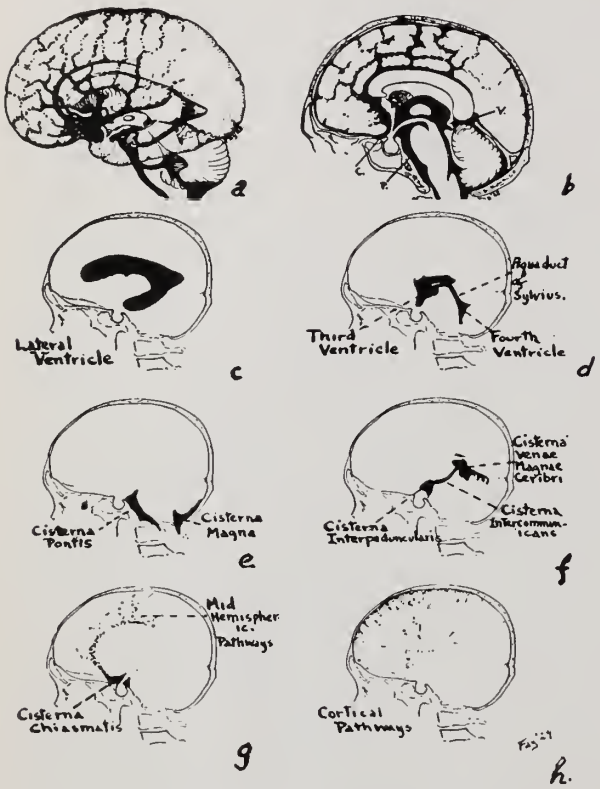


Fig. C—Diagrammatic representations of the cerebrospinal fluid pathways and spaces, showing sagittal sections with a key to the principal cisternae usually visualized on the roentgenogram. Obstruction to the passage of fluid along any of these pathways produces dilatation behind the point of obstruction and failure to fill the distal channels.

As this fluid passes down through the third ventricle into the aqueduct, down the aqueduct into the fourth ventricle, it has now three possible outlets, the midline of foramen of Magendie, the two lateral openings of Luschka. Fluid is also elaborated in the fourth ventricle. The major portion of fluid is produced within the ventricular system. If it does not escape, if there is a closure of these outlets, three of them in all, two Luschka and one Magendie, we will get an accumulation of fluid and a typical picture of internal hydrocephalus, dilatation of the ventricles bilaterally, and no air and no fluid over or under the surface of the brain.

Fluid is absorbed after it reaches the posterior fossa; in other words this fluid must escape into this point. Here is a beautiful demonstration of the fourth ventricle and the aqueduct coming down. The fluid after escaping passes forward around the pons. We see in these cases, the cisterna pontis and the cisterna chiasmatis clearly. In the stereoscopic analysis of these plates you can see the optic chiasm, and the circle of Willis itself. Fluid (and of course we are deducing some of these facts from the air pathways that we see) passes forward and between the hemispheres and through the two incisuras or the two fissures of Sylvius in the region of the island of Reil. Take this individual with the dilatation of ventricles. Fluid has gotten as far as the island of Reil, but it cannot get beyond this point or over the hemispheres, due as we know to a plastic arachnoiditis. When you operate you see the pathways closed from old hemorrhages and old inflammations. These inflammations and hemorrhages occur at childbirth many, many times, and are unsuspected, but they leave their trail behind them. We see that they may be unilateral or bilateral. For instance here you can see that this hemisphere has no pathways, whereas the other hemisphere has. In other words, there is a unilateral closure, while below we have a bilateral closure.

It would be impossible to go over each one of these cases in detail. They are all dramatic stories of the inability to make a diagnosis until we had reached the point of careful encephalography. Here it is evident that we have a deficiency in the island of Reil. This is most important as far as the development of speech is concerned. If such lesions occur early, there may be great delay or inability to develop the speech centers. I have one here in which you see this defect very definitely. This was a mentally defective child, whom the parents brought to the clinic because the child was delayed in walking, did not talk and apparently did not see objects very well. It does see objects, but it hasn't the ability to coordinate its visual mechanism with its motor mechanism. Here you see the story. The cortex is shrunken, the brain is already atrophied, and you see the two islands of Reil already atrophied. What chance is there to lay down a speech plan in a brain already deficient in its areas of reception, for memory, and so forth? This child has no gross neurologic defect. You would expect to find all the positive signs of neurology. Your neurologist will say he cannot find the positive signs of an extensive organic lesion.

Here is a man who simply becomes an economic loss to the community. He received a minor injury, some two years before. He cannot walk. He cannot talk very well. He has lost his ambition and his initiative; he is slow, dull, and mentally deteriorated. You ask if he is getting compensation. He is a compensation case, all right. You might put him down for a posttraumatic neurosis, and refusal to work, perhaps a malingerer. Many have been classed like that. You do an encephalogram and you see this

interesting thing. The man has not lost brain in a large amount, but he has lost it where he needs it most. In our industrial problem today we have this to face. If we do have an organic change in the brain, we owe that individual compensation from the industrial side. On the other hand, the malingerer is just as easily detectable because there are perfectly normal findings in a person who claims to have a great many symptoms. The encephalogram has come to be a means of different diagnosis. I would not trade and you would not trade the cerebral atrophy we see here or here for any amount of compensation. On the other hand, no one wants to pay an individual compensation when there is no actual damage demonstrable, even though we do not see it neurologically. Today our industrial field has to recognize this possibility. It solves the question many, many times. Some of these individuals are truly worthy of careful consideration. Others are purely taking advantage of the laws as they exist today. This is a means by which you can determine the difference between the two.

To get back at this point to where we left off, after the fluid has reached the subarachnoid space it is now outside the brain and must, according to Weed, reach the surface for elimination, approximately ninety per cent being put back into the longitudinal sinus which you see in these films very clearly, the longitudinal sinus and its diamond shaped structure. We find it here again. The pacchionian bodies are attached to it and hang from it. If the obstruction occurs at this point, then we get just the same mechanism as we do in the internal hydrocephalitis. We get damming all the way back to the ventricle and hence an internal and external hydrocephalitis. If we get obstruction at the outlet of the fluid we get damming not only over the hemispheres and to the base, but back into the ventricle, and we get a dilated ventricle which is the result of the hydraulic pressure exerted from the point of obstruction to the source. Here we have the block at the sides of the cerebrum, and there we have our dilatation of the ventricle and all the system behind that point which you see so clearly in this case. Therefore we are dealing with the same factors as we are in the renal system. The only difference is, there is a sphincter at the base of the ureter and also a sphincter at the neck of the bladder. We get an hydraulic dilatation behind the point of the obstruction in the renal system and also in this cerebrospinal fluid system.

Let us deal a moment with the problem which is confronting us this morning as far as the epileptic is concerned. All neurologists will tell you that it is difficult to find positive symptoms or signs in the idiopathic epileptic; that he is apparently normal one day and has violent convulsions the next; and after a few hours is normal again. Occasionally we have actual gross lesions of the brain. For instance, in this case where we have a definite tumor we can diagnose that tumor from two standpoints. Here is a depression in the roof of the ventricle, here is a shift of the ventricle and downward pressure. I removed an endothelium about the size of an hen's egg from this area.

The diagnosis of a Jacksonian type of epilepsy or a focal type is not a difficult one. The neurologist will always suspect a focal lesion and probably an organic lesion, but it is the so-called idiopathic group of epilepsy that has disturbed us for a long time. Idiopathic means without demonstrable cause. During the last four or five years since encephalography has been used we have found that many idiopathic cases have become "symptomatic." In other words, we not only can trace the disturbance in the mechanism and see the pathology we couldn't see before, but we have had to admit today that eighty per cent of epileptics are "symptomatic," if you like. We no longer speak of epilepsy as a disease. We call the whole group the "convulsant state," and it is true, the acute convulsion is just as much an epileptic phenomenon as the chronic recurring cycle of events that makes an individual an epileptic. Today, according to Kinnear Wilson, Foster Kennedy, Lennox, Cobb and others, we are not dealing with a disease. We are dealing with a symptom complex. We are dealing with a chronically recurring cycle of events which is a symptom complex, not a disease. Kinnear Wilson, who was a pupil of Gowers, one of the most scholarly men we have in the field today, has devoted himself to the subject of epilepsy as a lifelong avocation. He determined that only sixteen per cent of the cases could be authentically traced or ascribed to hereditary factors. Too frequently the concept in the past has been that these cases are mostly hereditary and seldom acquired. The reverse is true today.

A neurosurgeon by the name of Swift on the west coast in Seattle has made one of the most outstanding contributions to this problem. He found venous anomalies in about twenty per cent of his cases in which we have a deficiency now in the venous drainage mechanism of the brain. We have been able to demonstrate a deficiency in the eliminating mechanism along the longitudinal sinus in approximately eighty per cent of the cases studied. Beyond that point we have been unable to establish an elimination defect.

Winkelman has worked on a large series (350 brains), in which eighty per cent have shown definite changes in the pacchionian areas. In the

twenty per cent which Swift came upon he found stenosis of the two primary jugular outlets to the skull. It is no remarkable thing to expect nature to always make her bony outlets for the jugulars the same, but when Pendergrass and I checked the problem in Philadelphia we frequently found in the hereditary type a great difference between the size of the jugular outlets. Swift showed the development of the cerebral venous sinuses and in these hereditary idiopathic epileptics they are frequently deficient.

I want to illustrate that point. Here is a man who has had convulsive seizures since about twenty-four years of age. I know nothing of his past history. I just saw him for a moment before he came. He gives the history of convulsive seizures about once a week at the present time. Recently his longest interval has been two weeks, and at one time he had a long interval of two years, but if I could pass him down the clinic here for you to listen over the base of the skull and have you hear the loud bruit which occurs at this point, you might be able to see the pulsation as well. This vessel is as large as my little finger. I don't know what it is. I must admit I am intrigued. When you listen to it there is no question about a great bruit on that side. Here is one of the very anomalies similar to those which Swift found. It is probably arteriovenous. This man must be carefully studied from this standpoint by X-rays, especially over the base of the skull, and if possible with encephalography to see where this anomaly occurs.

The interesting thing in this patient, as in all of them, is the amount of water taken in during a day. The average is about two quarts. I can't demonstrate anything else on this patient. There are no positive neurologic signs, there are no positive signs of what we would expect at this point. Therefore he shows nothing more than the idiopathic epilepsy and a cycle of recurring attacks, and he is a large fluid consumer, as most of them are. Remember in yesterday's clinic we discussed what happens to ordinary tap water when you take it into the gastrointestinal tract. It gets into the vascular system and some of it is up here within the skull and must get out. Here, it is probably a problem behind the actual mechanism of venous drainage. When we began to follow out Swift's idea, we found that any obstruction along the venous side would produce a change in intracranial pressure very quickly.

We will return for a moment to the question of the convulsive state. Hughlings Jackson pointed out that a diseased cell could not function in an increased capacity. In other words, you get loss of function, not increase of function, when brain cells are injured. Today we must visualize a convulsion from a new and interesting standpoint. It is the most beautiful demonstration of what the motor cortex can do when there is no control over it whatsoever; in other words an epileptic lying at your feet, instead of being an object of disdain if viewed impartially, becomes the most beautiful demonstration of what the motor mechanism can do. We would stand and watch a runner on the 220 yard dash using the same muscles with the same power and cheer him. Because we see some person making purposeless movements and without conscious direction doing the same thing in a violent manner, we turn our backs and say it is a disease. It is not. It is the same explosion of the motor area, whether voluntary or involuntary, which we see in the most healthy state. Therefore until the late stages of degeneration, until this pressure atrophy has formed an hydraulic cast, we see the violent forms of an attack indicating a healthy cortex. No one has shown a constant pathology or characteristic change in the motor cell. There is no pathology of the motor cell. There is a pathology in the drainage mechanism of the brain of the epileptic, acute or chronic. The factors predisposing to a convulsion are acting *on* the brain. The release is purely motor discharge from healthy active cells.

I hate to condemn this free administration of fluid, especially out here where you have such delicious water, but we are now dealing with a question of hydraulics. We are dealing with a question of applied pressure to the surface of the brain.

For example, take the simple tendon reflex, the knee jerk. By introducing a pressure mechanism in the cord such as a cord tumor or compression, we immediately change our reflex phenomenon. For instance, an ordinary reflex phenonemon obtained by a simple stimulus applied at a proper point will bring forth a motor response which we term "normal" under certain conditions. As we subtract the cortical influence on this segment of the cord that produces this ordinary tendon reflex, we increase that reflex and finally the stimulus itself. If we have a complete lesion of the cord, that is a subtraction of all cortical influence, the same stimulus instead of producing only this single reflex will now spread to the other side of the cord and beyond, and we get adduction of both legs. The same stimulus instead of being confined to the muscle group now spreads up the cord to give you a mass reaction of both lower extremities. Remove your pressure from the cord; that is, remove the cord tumor or relieve your fracture dislocation ,and you get a return of not only power, but you get a return of the single reflex to the

normal as the cerebral tone checks and inhibits the spread of that impulse.

We are dealing briefly today with this same principal, a pressure phenomenon applied to the anterior half of the brain. As you see here, no matter what the lesion, the area of atrophy is the same. Here is an imbecile. Here is a posttraumatic. Here is a typical epileptic. Here again is an epileptic. Notice the beginning atrophy of the frontal pole, characteristic in all of those epileptics, after the third to fourth month of their major seizures. Note the beginning atrophy here in the midline. Here is a child with convulsive seizures. Notice the atrophy of the cortex. An hydraulic cast, which at one moment releases inhibitory tone, so that at that moment any stimulus coming along central, peripheral or, visceral may throw the motor system over into a violent response. That response now becomes a mass brain reaction; instead of a simple segmental cord reaction, it becomes mass reaction of the entire cortex. We are dealing with applied pressure on the only part of the entire motor system exposed to such a force and the only gray matter or ganglion cells of the motor system exposed to a direct hydraulic or surface pressure. Our cord gray matter cells of motor origin are surrounded by a firm wall of white matter, as are the fibers going to and from the cortex. The ganglia at the base are walled in by these white fibers and protected. The vascular supply is protected. But here alone on this delicate cortex with the vascular supply richer than the matrix of your nail, easily disturbed by pressure phenomena so that it brings into the cycle of events what Lennox and Cobb and many others have shown, an anoxemia we get increased permeability, established by Landis, and with edema we get pressure. On top of that is a vasomotor disturbance. There are many who feel the vasomotor system has something to do with it. Nevertheless something must *predispose* the patient to an attack, and when the time is right the attack occurs.

In the few moments I have left I want to show you some slides on the control of the fluid problem, which has indirectly controlled this frontoparietal fluid cast and pressure, and whether we are correct in assuming that this pressure is the predisposing factor or not remains to be seen, but we can say that you do control this pressure factor, and there has followed marked clinical improvement. Take the work of Elsberg and Pike. They show that by introducing vaseline under the skull in a mass to produce intracranial pressure, the animals in which they introduced the foreign body reacted to one-half the dose of absinthe that was formerly necessary to produce convulsions. On the other hand, if they took the animals and dehydrated them; that is, subtracted fluids from the tissues and reduced intracranial pressure along the lines of Weed, it took twice the dose of absinthe to produce the convulsive seizure. Again, if they gave the animals plenty of fluid, they could again get their convulsion seizures on one-half the dose. In other words, fluid predisposed the animal to a convulsive response.

Rowntree, as you know, at the Mayo Clinic, has introduced a stomach tube in the animal and simply added fluid in large quantities. In four to five hours the dog began to salivate, have general convulsions and usually died in status, because of the simple addition of ordinary tap water. Kubie took this one step further. He found, as all of us have found, by repeating this work, that you can hydrate an animal and produce convulsive seizures very readily by the simple process of over introduction of fluid. Fremont-Smith added to the situation pituitrin, which immediately cut down kidney output. He rapidly got his convulsions by keeping the kidney from eliminating the fluid as fast as the animal received it, which is usually possible up to the second or third hour.

If you cut down the kidney output and force the fluid intake, the convulsive seizure occurs within two to three hours. Weed carried the experiment a little further by introducing hypotonic solutions into the vein, that is subnormal values of saline ratios. He produced convulsions in an hour and thirty-five minutes to an hour and fifty-five minutes in his animals. Ayer and Weed noticed when hypotonic solution was introduced into the cisterna magna over the surface of the brain convulsive seizures occurred very rapidly. It seemed a problem as to how long it took the fluid to produce this pressure mechanism, whatever it is. Kubie analyzed this work from another point of view. He checked and found the same things these other investigators have found, but further established that if he introduced a spinal needle into the cisterna magna and drained the spinal fluid away while the animal was receiving large quantities either by vein or by stomach tube, the animal did not have convulsive seizures and was none the worse for the experiment. Furthermore, if after an animal had developed status he drained the cerebrospinal fluid system, he frequently saved the animal. These convulsive responses have been termed "water intoxication."

Therefore, if we are dealing with a symptom complex, we are not dealing with anything you can cure any more than you can cure diabetes. You can't cure diabetes; even if you get the patient symptom-free and sugar-free the pathology remains in the pancreas. You can't cure epilepsy unless, as rarely occurs in the life history of these

patients, you have an actual growth that can be removed. You can't remove the pathology that is already there. You can't eliminate it. At the best you can only control the symptoms or attacks just the same as you control the diabetic symptoms. You can control the diabetic symptomatically and you can get him sugar-free provided he stays on a careful balance and gets his insulin. We have been able to demonstrate that you can control grand mal, the major convulsive phase of epilepsy, so long as you can balance the fluid and maintain the balance, but human nature is the same. Thanksgiving, Christmas, Fourth of July are disastrous in this problem. The patients must celebrate. When they do, over they go, and then, on come the convulsions. You can't judge the results of control of attacks by the number of attacks that may occur in a period of a year, although we have been able to minimize these to a point where there is no question about the control, and yet you wouldn't assume for one minute that you had a failure in your control of the diabetic if during the course of a year he showed sugar in the urine two or three times. You wouldn't assume for one minute you could cure tertiary lues. You may be able to get a Wassermann-free state for a period of one year or more, but none of us would want to take a chance of having one eradicating treatment and letting it go at that. Tertiary lues once established is not curable, neither is this condition; it is controlled, and we will show you some sildes which demonstrate our point of view.

Here is a case in which we have a patient placed on 400 c.c.'s of fluid. Attacks began at nineteen

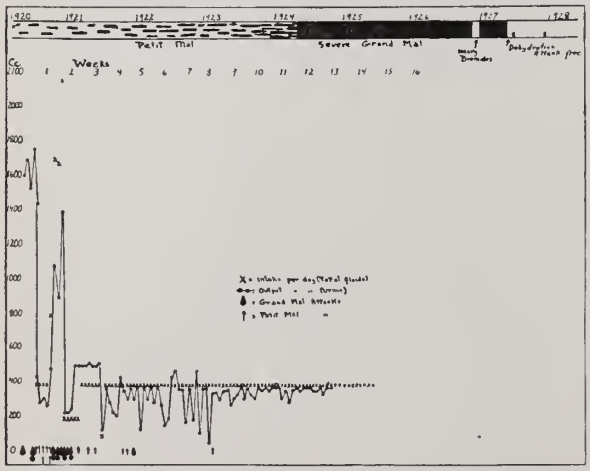


Fig. D—Relationship of attacks to intake and output. Initial restriction to 400 cc. of fluid brought about petit mal for the first time in two and one-half years. Unrestricted intake was then followed by a series of grand mal seizures. Limitation of fluid to 400 cc. resulted in disappearance of attacks. Patient has been free from attacks for over two and one-fourth years, with the exception of three instances associated with fluid indiscretions. The longest interval prior to dehydration was six weeks under a heavy dosage of bromide.

years of age. The patient is twenty-two. Grand mal occurred three to five times a week. The longest interval was five to six weeks. She was placed on 400 c.c.'s of total fluid. Notice these are the grand mal seizures which occurred during the first two weeks. If you count them up there are approximately twelve convulsive seizures which occurred during that period. As the fluid was restricted to 400 c.c.'s total intake, notice petit mals returned for the first time in the history of her attacks, and these were petit mal seizures without loss of consciousness. At the menses there were four attacks of grand mal and then petit mal, two petit mals at the next menses, and here the intake and output balances almost exactly; as we will show you, by balancing the diet and the fluid intake you can get almost an exact balance of output and intake.

Here is the situation in relation to fluid. This patient comes in, is put on 400 c.c.'s of fluid. Here he has a series of partially major attacks, that is he falls, has a few movements and gets up. He had a history of seizures since nine years of age. He has gone two years and three-quarters with four convulsive episodes, whereas he had nineteen to twenty-five a month before dehydration.

Here is an increase in fluid intake, and notice immediately what happens to the grand mal seizures, not only an increase in severity but an increase in number. The fluid intake is again reduced to 200 c.c.'s and we have the reappearance of petit mal, taking the place of grand mal. When placed on definite 400 c.c.'s we have occasional attacks at the end of the second month and one attack of petit mal while swinging a golf stick.

Following that was Thanksgiving, and following that was spring, and following that was a four thousand mile trip on which the hot dog stand and the popcorn stand pushed him over the fluid level. Each event was followed by a major attack, the only ones encountered.

On a balance here of 340 c.c. this patient is putting out more than he is taking in. This is a question of diet. When you dry the diet you get a balance, with occasional outputs over the intake which are unexplainable. I think Gamble of Harvard ha sexplained that, on the presence of fixed base. These are petit mal attacks which occur straight through. This boy had grand mal attacks, and had them for four years. After his fluid balance he has had three major attacks in the last three years. He is the first case in this series. Even on eight total ounces per day for three months it is impossible to control the petit mal. The petit mal is another factor. However, he goes to school and he does his work. He may have a slight jerking of the face, jerking of the

hand, and it is over. Formerly he fell and was unconscious for two or three hours.

Here is a typical case taken over a period of six months. Notice the difficulty in this case in getting a balance, partly because the patient was mentally defective. By drying the diet we get a balance of intake and output. Notice the relation of grand mal attacks, now petit mal, and then their final disappearance. That was May of last year, and there have been no attacks since that time.

Here again one cannot get a favorable response immediately. Here is another case in which it was difficult to obtain a balance until the patient came into the status. We took him into the hospital and straightened him out. He had one attack last May and one in February; two in a year compared to two a month prior to his fluid limitation.

Here is a case with occasional grand mal attacks, perhaps three to four or five a year. He goes six months without seizures, a cooperative patient, with no mental deficiencies. He is easily balanced. You can draw no conclusions because the intervals may be very long.

Here are twenty-two cases that have been two and one-half years on a fluid control routine.

The grand mal is the thing that produces not only the economic loss of the individual but also the high pressure during the attacks is probably one of the factors behind the hydraulic cast.

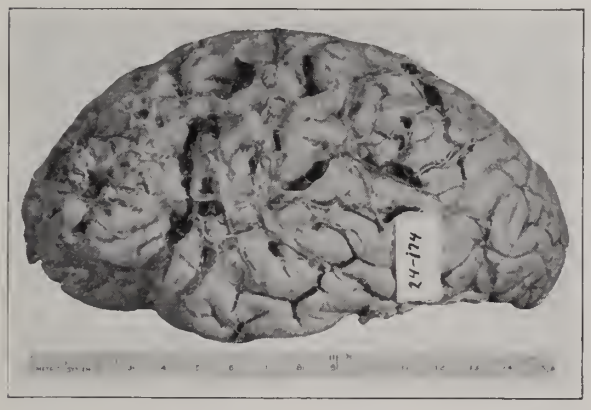


Fig. E—Lateral view of the brain from a case of chronic epilepsy and mental deficiency. Note the wide fluid pathways in the frontoparietal areas. The arachnoid has been carefully opened to show the width and depth of these fluid pathways. Note the convolutions have suffered most in the areas of these fluid pathways. The crest of the convolutions has escaped for the most part. Note further complete escape of the occipital pole from this process as well as the temporal lobe and the under-surface of the frontal lobe. This marked atrophy does not conform to any vascular plan as both the temporal and under-surfaces of the frontal lobe escape. It is exactly in accord with the cerebrospinal fluid circulating plan and we believe this atrophy to be due to low grade hydraulic pressure in the walls lining the fluid pathways in the presence of over-accummulation and pressure within the closed confines of the skull. (Preparation Dr. N. W. Winkelman.)

Above all is the gradual mental loss that comes on with the progressive cerebral atrophy due, we believe, to the hydraulic cast and the chronic ischemia. No matter if the convulsions are controlled in this group of mental defectives we have only a high grade moron with which to deal and this is an even more difficult problem to handle than the epileptic.

Our hope in the problem of epilepsy lies in early treatment along proper physiological lines before mental deterioration occurs.

I may say in closing that Hippocrates in 400 B. C. made these statements: "The brains of epileptics are unusually moist." That has been confirmed by all of the modern work, and he said further, "He who can make the body humid or dry, hot or cold by regimen, may be able to cure this disease." He was mistaken about the cure, but in the rapid progress of medicine during the last 2,000 years, to quote Lennox, "we have almost caught up with the father of medicine."

CARE OF THE INDIGENT SICK BY MEDICAL SOCIETY CONTRACT

Robert L. Parker, M.D., Des Moines

Agitation in the press, activities of lay organizations, the formation of a Council on Medical Economics by the American Medical Association and continuous discussion of various problems arising in state and county medical societies, all indicate that the economic problems of medical practice have become well nigh the first order of business for organized medicine as a whole, and that we are now or shall in the near future be confronted with a tendency toward the socialization of medicine. This discussion cannot concern itself with the problem of state medicine as a whole, but it is hoped that this presentation may point the way to a solution of one of the ever present problems of medical economics, that of caring for the indigent sick in the local community and that by so doing we may establish a sound premise from which to attack the greater problems presented by the modern tendency to socialize medical practice.

State medicine may be defined in a variety of ways; but whether we do so by merely quoting the dictionary definition of the two words "state" and "medicine," or by giving an exposition of the panel system as found in Great Britain, the proposition would seem to bring itself down to two simple factors: First, that the patient is denied the precious privilege of selecting his individual physician; and second, that some governmental agency comes between patient and physician, directing their relationship and assuming all financial responsibility.

Throughout the United States we already have a portion of the population receiving medical serv-

ices which are authorized and paid for by some agency or subdivision of the state. The law in Iowa and many other states makes the township trustees and county supervisors responsible respectively for authorizing and paying for medical services given the paupers in their various communities. While the law would seem generally to contemplate a uniform treatment of physicians rendering bills for such services, the fact is that practices vary widely. We have in the state of Iowa at least one county which for several years has not paid anything to any physician for medical or surgical services given the indigent of the county. One or two counties in Iowa pay for such services in full on the basis of the county fee bill. Such lack of uniform practice produces numerous complaints on the part of the medical profession, the local tax unit (in Iowa, the county board of supervisors), the public, and the paupers.

The doctors are nearly always underpaid. They are frequently treated as seekers of gratuities and often experience difficulty in collecting legitimate bills; all of which is causing a growing resentment on the part of the medical profession, which properly feels that their services should be paid for on the same honest basis that the grocer, the landlord and the coal dealer are remunerated for the commodities they furnish the indigents of the county. To the county authorities the continual consideration of separate bills, the effort to appraise the value of services with which they are unfamiliar, and the handling of frequent complaints from the profession, the public and the paupers, make the task an onerous one. While the public as a whole is fairly indifferent to the situation, yet all of those who are interested in health and social welfare are becoming increasingly dissatisfied.

From the viewpoint of a pauper we should not expect complaints, but the fact is that in those counties where one or a few individual physicians are especially employed, there is no opportunity for the patient to make a selection and the usual objections which can be made to state medicine are applicable.

Eleven counties in Iowa are now dealing with the pauper sick problem in a way which experience has proved highly satisfactory and it shall be my purpose to explain briefly what this plan is and then set forth its advantages to the profession and to the public.

In these eleven Iowa communities, either the entire county society or the members residing in certain portions of the county have entered into a joint contract with the county supervisors to render medical care to the county paupers of a given territory for a fixed annual sum. The contracts vary as to detail, but certain factors are fairly well standardized. In five cases the entire county is included in the contract. In the other six, the present contract is limited to the principal city or to certain townships most thickly populated, where the greatest number of paupers is to be found, although in most cases the plan is to eventually include the entire county. There is considerable variation as to the exact services included in the contract, as for example, in at least one case no surgical work is included except minor office surgery, while in at least one other county all surgery is provided for in the contract. There is also considerable variation as to provisions for treatment of contagious, and especially venereal diseases, the supplying of surgical appliances, serums, antitoxins, salvarsans, etc. The contracts vary, too, as to whether or not the county farm and county jail are included. A tabular summary of these various details is included in the accompanying table. This chart also shows the territory covered by each contract and the number of physicians in the society, as well as the amount paid annually by the county supervisors to the county society for these various services.

Despite the necessary variations, it has been possible to prepare a standard contract and model articles of incorporation based upon the best features of those which have proved successful in the past and the Iowa State Medical Society supplies these to those societies wishing them which are now working on the problem. The contract is necessarily in skeleton form and the chart which analyzes the details of the various contracts was worked out for the purpose of assisting a society to fill in the details of a new contract.

The incorporation is a vital step in the procedure, since it is in nearly every case required by the board of supervisors in order that they may have a legally responsible body with which to do business, but it is also highly desirable from the viewpoint of the members, since one of the main objectives is to limit the personal liability of the incorporated. Article VI of the model articles of incorporation referred to, reads as follows: "Neither the members nor their private property shall be liable in any manner for any corporate debts, obligations or undertakings, and this article shall not be altered or changed except by unanimous consent in writing."

In this connection an important problem has already arisen and has been practically settled by the Council of the Iowa State Medical Society, as to whether or not physicians who do not wish to be members of the incorporated society and participate in the contract can still remain members of the county society. Assisted by some legal opinions upon the subject, the Council decided that an

incorporated medical society is a creature of the law and an entity separate and distinct from the chartered county society, even though the membership and officers are identical.

A chartered society is a creature of the House of Delegates to which it owes its being, and the incorporation of a body for business purposes in no wise affects the status of that chartered county society nor of its members, as far as membership in the state society and the American Medical Association is concerned. While this distinction may seem a purely technical and legal one, it is well to keep it in mind, for the entire structure of organized medicine is based upon the chartering of component county societies by the state association.

One of the interesting facts to be noted in connection with these contracts is that while the amounts vary greatly, the smallest being $1,200 and the largest $12,600, still there is a fairly close relationship between the number of physicians in the contracting society and the sum paid, and also between the population served and the sum paid. The average of these contract sums is equal to about $100 per year per society member and about ten cents for each resident of the county or area served. While neither of these standards is an accurate test of the proper sum to be paid for such services, yet they have proved rather effective, practical norms for determining the approximate amount the county should pay. The amounts paid to the eleven Iowa societies having contracts, the number of members in each society, the population of the county and the territory served are also shown in the tabular analysis previously referred to.

From the viewpoint of the medical profession and the physicians participating in these contracts, the plan seems eminently satisfactory. This is evidenced by the fact that one society has been operating on this basis for twenty-six years and two others for twenty years. Personal inquiries and conversations with numerous members of these various societies indicate that there is almost universal satisfaction on the part of the members and that they feel the plan has not only solved many of their annoying problems in connection with caring for the indigent sick, but that it has proved a great boon to the societies themselves, through uniting the members in a common cause.

While two of the eleven societies make a practice of dividing the lump sum annually received from the supervisors, and paying it out to the members in proportion to services rendered, yet the general practice is to use the entire sum for the advancement of organized medicine and the general welfare of all the members. In nearly every case the first use to which sums are put is the payment of state society and American Medical Association dues and the defraying of the expenses of the county society operation and programs. In the two societies just referred to, the remaining proceeds are pro-rated among the members, each member rendering to the society a full fee bill for all work done under the contract. These bills must of course be scrutinized carefully and sometimes adjusted, the total computed and the balance in the treasury then divided on a percentage basis. The two societies using this method have in the past years been able to meet all dues and overhead and pay their members seventy-five or eighty per cent of the regular society fee bill for the services rendered under the contract.

The preferred method, however, leaves all the money in the treasury for the advancement of the profession and results in the society always having available sufficient funds with which to carry out any scientific programs or projects which will benefit the members. Such societies hold monthly or fortnightly meetings and have talent of a high order for their programs, usually preceding a program with a dinner to which physicians from surrounding counties are invited, all expenses being paid out of the general treasury. Such societies are naturally among the most active in the state, and the unity and fellowship among the members, which is in part a result of the county contract and the financial independence which it affords, furnish a strong and positive argument for this plan. Indeed, if it accomplished nothing more than the uniting of the society in a strong and active group, it would be worth the effort made and those members who are contributing an average of $100 in service during the year should well feel that their contribution to organized medicine and their profession is more than worth while.

There is, however, a wider aspect of this matter which should be considered and which was referred to in the introductory remarks. Past President M. L. Harris of the American Medical Association repeatedly expressed himself very strongly to the effect that the most effective way to avoid state medicine was for the component societies to act as a unit in handling all problems of indigency and semi-indigency, whether dealing with county paupers or objects of private charity. From this viewpoint it would seem that the organization of eleven societies in Iowa to handle the county poor work on a guild basis is a very positive step in the right direction. Indeed, the largest of these societies and the one receiving the largest annual sum, $12,600, has gone beyond the mere delivering of services to the county paupers and has a tripartite contract with the supervisors,

ANALYSIS OF COUNTY CONTRACTS

for Care of Indigent Sick in Iowa, 1930

Name	*Amount*	*No. in Society*	*Territory*	*Population*	*No. Licensed Physicians*	*Year Contract Inaugurated*	*Method Used*
1. Waterloo Medical Association	$2000.00	40	City of Waterloo	36,900	55	1910	Rotate; sixty days' service per member each year
2. Hardin County Medical Society	1600.00	28	County	22,320	30	1904	Members answer calls from supervisors or social worker
3. Marion County Medical Society	2430.00	21	County	24,694	25	1923	Nearest physician attends case
4. Marshall County Medical Society	2000.00	43	County	33,057	47	1924	Patient may choose his own physician
5. Scott County Medical Society	12600.00	86	City of Davenport, Bettendorf & Davenport Township in said county	63,000	101	1930	Rotating staff at clinic-dispensary
6. Washington County Medical Society	1800.00	21	County	19,370	22	1929	Each patient selects his own physician
7. Webster County Medical Society	3000.00	46	City of Fort Dodge plus one Township	21,702	47	1915	Patient selects physician; authorized by welfare society
8. Fort Madison Medical Society	1200.00	14	City of Fort Madison	11,229	16	1910	Rotate each month; each man takes his turn and the next man is alternate
9. Mahaska County Medical Society	1800.00	20	County	26,644	29	1930	Cases rotated; each physician follows case to completion
10. Jefferson County Medical Society	1600.00	10	Fairfield, one suburb and all brought to hospital	16,385	19	1929	Eight members rotate monthly; two eye, ear, nose and throat doctors
11. Council Bluffs City Medical Society	6500.00	41	City of Council Bluffs and Kane & Lewis Townships and all brought to hospital	40,900	64	1930	One man answers emergency and house calls. Rotate; 3 months' periods at dispensary and hospital

ANALYSIS OF COUNTY CONTRACTS

for Care of Indigent Sick in Iowa, 1930

Disposition of Funds	*Major Surgery included*	*Minor Surgery*	*Serums, Medicines, Dressings, Etc.*	*Venereal Diseases*	*County Farm*	*County Jail*
In society treas. for expenses, dues, etc.	Yes, if patients are removed to Waterloo and proper hospital facilities provided	Yes	Shall furnish medical and surgical service including medicines and supplies except antitoxin and salvarsans	Yes	No	Yes
In society treas. for expenses, dues, etc.	Yes	Yes	Medicine and dressings, but no serums, antitoxins nor fumigation	No	Yes	"Any person in Hardin Co."
Pay members on fee basis	No	Yes	Yes, except ambulance service, serums and antitoxins	No	Yes	No
In society treas. for expenses, dues etc.	Yes	Yes	Yes, except serums and antitoxins and salvarsan	Yes	No	Yes
In society treas. for expenses, dues, etc.	Yes	Yes	Yes, but not artificial limbs or members or trusses	Yes	Yes	Yes
In society treas. for expenses, dues, etc.	Yes	Yes	Yes, except serums and antitoxins	Yes	No	No
Pay members on fee basis	Yes Without pay	Yes	Yes, except antitoxins and insulin	No	Yes	Yes
In society treas. for expenses, dues, etc.	Yes	Yes	Yes	Yes	No	Yes
In society treas. for expenses, dues and society endowment	Yes	Yes	Yes, except in hospital, jail, poor farm. No serums, antitoxins or salvarsan	Yes	Yes	Yes
In society treas. for expenses, dues, etc.	Yes	Yes	Yes	Yes	No	Yes
In society treas.	Yes	Yes	Yes, except toxins, antitoxins, serums, quarantine, artificial limbs or trusses and salvarsan	Yes	Yes	Yes

the visiting nurses association and the social service organization, by which the county pays for medical services and the lay organizations furnish the building and auxiliary services. Under this plan a clinic-dispensary is being conducted in Davenport to which are admitted those borderline cases that are not "on the county," but which are not able to pay the private physician for medical care. It should be noted in this connection that special provision is made in this particular contract for a committee of the medical society to have final authority in determining indigency and admissibility of any particular case, even though previously approved for admission to the clinic-dispensary by the nurses association or the welfare organization.

It has not been found difficult to persuade the county boards of supervisors that it is better to pay for medical services in an annual lump sum, rather than make payment of individual fees, which multiplies the work of allowing and paying bills by at least fifty to one hundred times, and may produce that many specific problems. The Iowa law which provides for the rendering and payment of medical services to indigent persons is not perfectly clear. In this respect the situation is probably similar to that in other states, so that differences of opinion beween boards of supervisors and the physicians rendering the bill may very easily occur. In Iowa there are a half dozen cases of this sort which have gone to the Supreme Court, indicating that serious litigation may arise in this field. In our state, however, the principle is fairly well established that, provided the services have been properly authorized, the physician may collect the regular fee for such services. Experience in the last few years has indicated that in most counties it has only been necessary for the physicians to take a firm stand on their legal rights in order to secure reasonably fair treatment. In the majority of cases, once the doctors of the county have shown definite intentions of being treated in a fair and business-like fashion, there has been little difficulty in reaching an agreement, which has in several cases resulted in the county contract, since it does relieve the supervisors of the foregoing difficulties.

This situation, so full of annoying and difficult, possibly legal, complications, is the natural result of allowing the indigents themselves, the township trustees, or the overseer of the poor, as the case may be, to call in any physician of their choice and then allow him to take his chance of securing payment afterward.

The only other method, that of employing one or more county physicians to render such services upon an annual fee, is fraught with all the objections that may be made to state medicine, especially from the viewpoint of those reciving such services. County officers, at least in Iowa, are becoming increasingly sensible to the fact that it is unfair to force upon the unfortunate of their communities the services of some one physician, particularly as he is apt to be the one willing to take the job for the least money. While it might be well said in this case that "beggars should not be choosers," yet after all, looking at it from the social point of view, the broader purpose of such medical and surgical services to the indigent is that by keeping such persons in good health and in condition to take employment, the county is avoiding a paternalistic, pauperizing program and is definitely seeking to make such persons and families self-supporting members of the community. From this viewpoint, all medical and surgical services should be of the highest type and rendered by that physician and under those conditions which are most likely to produce satisfactory results for the patient. The county contract by which all the physicians of a society are employed provides for a discriminating choice, giving the patient that precious privilege of choosing his own physician and allowing for a degree of professional selectivity which generally results in that man being called to a particular case who is best fitted to render the service required. Of these two factors, the former is of course more completely operative in the rural counties, while the second is particularly applicable in larger places where the rotating staff system is employed.

In conclusion, then, the county society, generally incorporated for the purpose, enters into a contract with the county supervisors to provide certain specified medical and surgical services to the indigent of the county for an annual lump sum. As indicated by the accompanying analytical chart, these contracts vary greatly in detail.

Such contracts are eminently satisfactory to the boards of supervisors because they relieve these local officers not only of a vast amount of detail, but also of unpleasant controversies over fees, which may result in lawsuits. From the viewpoint of the public and especially of the indigents, the plan is humanitarian and socially sound.

The proceeds of these contracts are used in various ways, but have in every instance resulted in a strong organization and a better spirit among the members, and have created a well financed, closely coordinated guild group, whose united membership is fully prepared to meet the oncoming problems of state medicine or socialized medical practice, and to turn those tendencies in the right direction for the betterment of the people and the improvement of the profession.

FUNCTIONAL DISORDERS OF THE HEART

Fredrick A. Willius, M.D.
Section on Cardiology, the Mayo Clinic, Rochester, Minnesota

The subject under consideration is known by a multitude of names, each unquestionably referring to the same fundamental condition, but altered by various generations of physicians presumably to meet the requirements of different occasions. In civil practice the terms cardiac neurosis and irritable heart are frequently encountered. During the World War, conditions seemed to require a special nomenclature which apparently added to the already existing confusion, and such diagnoses were encountered as "effort syndrome," "neurocirculatory asthenia," "soldier's heart" and "disordered action of the heart."

It seems desirable to minimize the number of medical synonyms. It therefore seems logical to use one term, understood by all in denoting nervous disorders of the heart, and the term cardiac neurosis is adequate, terse, and convenient.

Patients suffering from cardiac neurosis frequently do not receive the interested and compassionate consideration to which they are entitled. Lack of patience and sympathetic advice often turns the patient away from practitioners of medicine, and he drifts to the various healing cults and to quacks.

The most important symptoms of cardiac neurosis are palpitation and tachycardia. If they are analyzed critically it is seen that subjectively, they result in what is termed heart consciousness, and that they are but manifestations of augmented normal function. Various associated symptoms sometimes occur which are largely the result of more appreciative sensibilities. The potential factors responsible for the development of cardiac neurosis exist in everyone, and occurrence or absence of the condition is essentially a psychologic problem.

In dealing with cardiac neurosis, as well as other types of neurosis, we are concerned in a considerable measure with a study of emotions. It is a misfortune that many of our intellectual geniuses whose efforts have been directed to the creation of poetry and prose, have ascribed to the heart functions that it does not have. It is not unusual to hear that the heart is the seat of the soul, the seat of love, the seat of generosity, or that the heart is broken. These are but a few examples of what the art of synthetic emotionalism does in vividly bringing the heart to the attention of many persons. Therefore, the mind, from early childhood, is indelibly impressed by the importance of the heart. Children know that each person is possessed of only one heart and that the continuance of life is dependent on the beating of that organ; the next step in reasoning is the conclusion that, if the heart becomes impaired, a serious state of affairs exists. All these commonplace reactions occurring in everyday life are subtle yet potent predisposing factors in the ultimate development of cardiac neurosis.

The heart of a perfectly normal individual is profoundly affected by emotional influences. Such emotions as fear, anger, expectation, and love are capable of accelerating the action of the heart and rendering a person heart conscious. Under average normal conditions, complete lack of heart consciousness is of course the rule.

Besides the elicitation of heart consciousness by emotional influences, the same result may be brought about by unaccustomed physical activity. Ordinarily, however, the ensuing realization of the rapid and forceful beating of the heart is so evanescent that in most instances no memory of the event is retained. Proof of this rests in asking the average person when he was last aware of the beating of his heart; the invariable answer is, "I do not remember."

With all these facts in mind it is not difficult to see how readily cardiac neurosis may develop in certain persons.

Temperament plays a significant part in life: the intense, dynamic person is usually extravagant with his nervous energy, and is prone to infringe materially on his reserve. When this occurs, the psychologic processes may become influenced; then judgment becomes warped, problems become magnified, worries creep into the consciousness, indecision becomes apparent, anxieties of one kind or another occur and sensibilities may become increased.

The expenditure of nervous reserve is of course a constant process and varies in degree with activity, preoccupation and the stresses to which the individual is subjected during his wakeful hours; such expenditure is usually reduced to a minimum when the subject is contentedly relaxed or asleep. The expenditure of energy that results from the carrying on of the involuntary functions of the body must not be overlooked. An ordinary day in the life of an average person terminates in a condition that is referred to as natural weariness. If the day has been strenuous, demanding unusual physical or mental effort, the person says he is unusually tired. This fatigue, to a large extent, is the expression of depletion of nervous reserve, varying from the normal amount to an amount

that cannot immediately be restored. A night's sleep usually restores the equilibrium. However, if the unusual expenditure of nervous energy is carried on to the degree of dissipation, sustained deficiency occurs which may be referred to as nervous exhaustion. It is at this stage that the patient's psychologic processes become disturbed, with the consequences that have been named.

It is very easy for the patient, when this state exists, suddenly to focus his attention on some vital physiologic process, which invariably is an involuntary one. It may be that of the respiratory mechanism, the digestive tract, the bladder, the heart or other organs.

We are here concerned chiefly with the heart, and as has been pointed out, the sudden realization of cardiac activity, which constitutes heart consciousness, at once calls the patient's attention to a vital part of himself, regarding which he has never been particularly concerned.

The patient is aware of an unique sensation; he does not remember ever before being aware of the beating of the heart. He begins to wonder what it means and is likely to count his pulse; immediately the pulse accelerates and heart consciousness becomes more pronounced. When the heart beats rapidly and forcibly and perhaps irregularly, the fear of death may develop in many persons. The patient is confronted with fear, anxiety, worry and uncertainty. Thus a vicious circle becomes completed; the already depleted nervous reserve is further infringed upon by the existing psychologic chaos.

Frequently such patients present themselves for medical advice only to have their fears and uncertainties magnified by the physician because of his lack of knowledge regarding the heart, or carelessness in examination.

It is the duty of every physician to determine the presence or absence of heart disease as soon as possible after the patient has consulted him. Often months and years of futile invalidism and mental anguish have resulted from medical error or uncertainty. Careful medical appraisal of the body as a whole, painstaking inquiry into the patient's life history, habits, and so forth, in conjunction with the necessary laboratory tests, should make possible the determination of his condition. Several examinations are sometimes necessary, but the period of observation should not be protracted. I cannot agree with those clinicians who still refuse to accept neurosis as a clinical entity. There are those who maintain that the various functional disturbances are the manifestations of concealed pathologic processes, and that examination has failed to reveal the real trouble.

It is interesting and amusing to review the various procedures that have been adopted over the years, in the treatment of neurosis. We must admit that some physicians are faddists, and frequently the prominence and success of a physician is dependent on his ability to sell a fad to his clientele.

It is imperative that the physician retain his judgment, that he maintain his perspective of medicine as a whole, and that he avoid straining the patient's confidence. He must not promise miraculous cures from procedures, the bearing of which on the actual condition is extremely remote.

The management of patients suffering from cardiac neurosis is often difficult and requires time and patience. This is possibly the reason why some clinicians are reluctant to assume responsibility in such cases. The physician must first attempt to obtain the patient's confidence. He must be interested and sympathetic with regard to the patient's recitation of symptoms, and he must realize that the psychic reactions of the patient are not normal and that argument without clear portrayal of facts is a waste of time.

After the establishment of the diagnosis the patient must be told the true nature of the derangement in carefully chosen but concise words, so that misunderstanding and resentment may be avoided. To tell the average neurotic patient that the trouble is all due to nerves, that it is imaginary, or that there is nothing wrong, is like pouring gasoline on fire. Much of a patient's resentment is the result of curt and disinterested medical consideration. It is always well to emphasize the fact that the complaints are not imaginary, and they are not. Considerable resentment is dependent on the fact that many persons believe that nervous disorders and imaginary complaints are synonymous, and their natural reaction to the declaration that their trouble is nervous, is to consider that their intelligence has been insulted, which it usually has. Patients with neuroses rarely create imaginary symptoms, but usually experience the sensations that they describe. The arguments brought forth by the patient with cardiac neurosis are usually logical, but the trouble lies in the fact that the original premise is fallacious and therefore the ensuing arguments are not applicable.

In most instances a full discussion with the patient and some relative, of the psychic and physical reactions involved in the production of the neurosis, in terms that the layman fully understands, will result in much benefit. If the patient's level of intelligence is low, much difficulty is encountered in convincing him of the facts, and under these conditions the influence of superstition is frequently very much in evidence.

Cautious and sympathetic inquiry frequently

discloses intimate information pertaining to the patient's life that has an important bearing on the conditions. Not infrequently, disturbing influences can be eliminated and complete recovery will ensue.

Other factors in the treatment of these patients are concerned with symptoms. Any reasonable procedure and hygienic factor that will improve the patient's general state of health is indicated. Mild sedatives are at times helpful, particularly if sleep is interrupted, but medication must be given with caution, for so many patients place all their faith in a bottle, thereby defeating the fundamental principle of their treatment.

Most patients who suffer from serious or advanced heart disease display few if any neurotic manifestations. It is often extremely difficult to obtain their complete cooperation in the maintenance of the necessary cardiac regimen, owing to their indifference to the hazards which they are willing to accept.

Certain patients afflicted with organic heart disease, however, have well marked cardiac neurosis. They often suffer more from the superimposed neurosis than from the existing cardiac disease. The prompt recognition of this fact is important, because the correct approach to the patient's problems and the institution of proper treatment is impossible without knowledge of the quantitative values to ascribe to the functional phase. In some cases it is difficult to prevent this dual derangement. It is necessary to inform the patient frankly of his cardiac lesion in order to obtain his cooperation in adhering to the restrictions which it may be necessary to impose. Free discussion, and warning of the danger of fear and introspection, with their resulting penalties, often will abolish such tendencies. A definite alteration in philosophy of life is an absolutely necessary accomplishment for sufferers with heart disease in order to avert psychic and emotional disturbances. The full realization that certain restrictions are imposed to modify the manner of living frequently fosters a more or less constant conflict of emotions particularly when the wage-earner in a family is affected. Patients must be made to realize that certain sacrifices on their part are necessary in order to attain a maximal expectation of life, and that the sacrifices must either involve the material things in life or life itself.

Certain disturbances in cardiac rhythm occur that are not necessarily dependent on structural changes in the heart, but are largely the result of augmentation of function. They may or may not be associated with the manifestations of cardiac neurosis.

Notable among these disturbances of rhythm are extra-systoles. They frequently occur in normal hearts; yet their presence in the heart invaded by disease is not unusual. They occur at periods of increased myocardial irritability, such as result from purely neurogenic influences, from tabagism, anemia, toxins, and so forth. They may be the basis for ultimate cardiac neurosis. Here again, the prompt and decisive interpretation of facts is of paramount importance in order to assure or warn the patient, as the case may be.

This arrhythmia usually can be abolished by increasing cardiac stability, and this is often effected by eliminating the evident cause. Medication is sometimes helpful. The judicious use of bromide in some cases and the careful administration of quinidine in others may give gratifying results.

Paroxysmal tachycardia is often due to a purely neurogenic mechanism and occurs entirely independent of the features of cardiac neurosis. Its continuation, however, and repetition of attacks seem to be intimately related to the psychic phenomena of true cardiac neurosis. The exact basis of this disorder is not known except for the fact that temporary release of vagal control occurs, as evidenced by the fact that vagal stimulation will sometimes suddenly and dramatically terminate an attack. That form of paroxysmal tachycardia which arises in the auriculoventricular node is usually of neurogenic origin, whereas that which arises in the ventricle is always associated with, and is evidently the result of, organic disease.

In cases in which the neurogenic basis of the disorder is clearly established, assurance to the patient is indicated. He must be impressed with the fact that although the disorder is unpleasant and disconcerting, its nature is not serious, that he will not die in the attack, that medical experience has rarely recorded the development of serious trouble, and that emotional display and apprehension at the time of the attack sets the stage for the next attack. A thorough trial of quinidine in adequate doses and for a sufficiently long time is always justified, as the frequency and severity of the attacks are at times modified and occasionally the seizures are entirely arrested.

Sino-auricular block or complete cardiac standstill is, according to our present knowledge, the result of vagal augmentation. An occasional interruption in rhythm may be mistaken for the compensatory pause following a premature contraction, but prolonged interruption, when three or more beats fail to appear, is fairly clear-cut clinical evidence of the condition. The identification of this disorder is practically always made by means of the electrocardiograph. If the cardiac standstill is sufficiently long, syncope or convulsive

syncope may occur. I never have seen a case in which death resulted from this disorder.

Complete heart block occasionally may result from vagal augmentation, but its occurrence is so infrequent as to be practically negligible.

In conclusion, I wish to re-emphasize the importance of separating clearly and decisively functional and organic disorders of the heart and of appreciation of the mechanisms evidently involved in the production of cardiac neurosis. Patients with cardiac neurosis should be accorded the courteous and sympathetic consideration to which they are entitled.

BIRTH INJURIES*

CHRISTINE ERICKSON HILL, M.D., Council Bluffs

A rather superficial perusal of recent literature would seem to show that being born carries almost as great a hazard as the later years of one's life. Intrapartum injuries fortunately are not common, neither are they rare; though not as frequently as has been charged can they be laid at the door of the obstetrician.

The etiology of a large per cent of birth injuries seems to be indefinite. Until more recent years, when antepartum care, medical supervision, and ability to recognize abnormality in the prospective mother, have made childbirth a scientific procedure, motherhood was rather taken for granted. Nevertheless, the great strain and push of modern life, social activities, commercial demands, poor living habits, nervous strain and unrest, may well add their bit in changing a physiologic process into a pathologic one.

Statistics in various clinics charge the cause of stillbirth to trauma in forty-five to fifty per cent of all cases. At the Manhattan Maternity hospital it was found in one hundred consecutive autopsies where the head was opened that forty per cent of the infants lost their lives from cerebral hemorrhage. The number of stillbirths in the different clinics varies in a small degree, however, and the death rate increases according to the number of children born to a mother. In 1917, Dr. Grace Meigs, in her report of maternal mortality in the United States, stated that approximately fifteen thousand women die in childbirth from conditions almost entirely preventable. Many writers and speakers have offered suggestions toward the betterment of the truly appalling situation. The one almost exclusive argument is better obstretrics.

A similar interest has been aroused in the cause and prevention of birth injuries to infants. Very exhaustive search has been made by the Children's Bureau concerning infant mortality. Following are some of the results: In 1920, in New Bedford, Massachusetts, of the eighty-four infants dying in the first two weeks of the year, only ten were recorded as birth injuries, while forty-one of these died within the first twenty-four hours. The latest authorities would ascribe forty-five to fifty per cent of this number to birth injuries. Autopsy alone in many of these deaths can give us the cause. If this were done, asphyxia, prematurity, congenital debility and similar causes would in a large measure disappear as the cause of death. Real progress and determination of such causes can be determined only by careful observation and skilled autopsy examination. According to Kuntzel, in only a very small percentage of the mentally deficient is there a history of instrumental birth. He found in four hundred and fifty cases of idiocy, only nine per cent were delivered by forceps and four and one-half per cent had difficult delivery but no operative interference. At the Vineland Training School for Abnormal Children the records of the majority of the pupils showed a history of extremely difficult prolonged delivery. In one hundred and twenty-five cases of a series of five hundred and sixty-two, fifty-four gave a history of no instrumentation. Jelliffe and Petersen found that prolonged labor was active in the production of eighteen per cent of idiocy. Shuttleworth and Potts' figures show approximately the same percentage.

It is quite evident from such statistics that there is an opportunity for improvement, not only in the technic of obstetrics but in the adoption of less conservative treatment, and that prolonged labor is more hazardous than scientific interference. Even though birth injury be suspected, frequently the obstetrician hesitates to so state because of the fear of criticism, too frequently ascribed unjustly to faulty technic or lack of skill.

Spontaneous labor in itself does not seem to preclude injuries, but the larger per cent occur in artificial termination, such as hastening labor by unnecessary routine, version and sudden extraction, high forceps, pituitrin with an obstructed passage, sudden impact of the head on an unyielding perineum or sudden and sustained compression of the fetal head through a disproportionate, unyielding canal.

Of the more common injuries, caput succedaneum needs no description, but the lack of attention which this condition receives should be noted. Frequently there is a hemorrhagic area under the pericranium with dilitation of blood vessels. The caput is a soft, doughy mass, pits on pressure, does not fluctuate, forms rapidly and may be mistaken for normal progress. Caput succedaneum is no-

* Presented before the Thirty-third Annual Meeting, State Society of Iowa Medical Women, Marshalltown, Iowa, May 13, 1930.

ticed immediately after birth when it is largest, gradually decreasing and disappearing in a few days. The size of the caput is in relation to the time of rupture of the membranes, amount of dilitation, and strength of uterine contraction.

Cephalhematoma is located under caput succedaneum only if extravasation of blood is large and a definite hematoma formed by separation and lifting up of the periosteum, showing a quantity of dark blood from two to four c.c. or even one hundred to two hundred c. c. Cephalhematoma is not coincident with presentation, but appears later. The treatment calls for injection of "friendly" blood, 20 to 40 c.c., taken from the vein of the father and injected under the shoulder of the baby. This usually suffices. Do not interfere surgically with tumor. Depression usually takes care of itself, but if not, modern surgery may succeed. The hemorrhage may be so serious, however, as to exsanguinate the infant. Radiograms may reveal a fracture of the occipital or parietal bone.

Injuries to the cranial bones are more serious after prolonged labor with forcible termination. The elasticity of overlapping cranial bones or mobility within sutures may cause fractures to occur, or part of the bone edge may become dislocated. This is more apt to happen in disproportionate size of passage and fetal head. Dr. Greofer found in twenty-five such cases that only one labor terminated spontaneously.

Cranial Injuries. There are several varieties of head injuries that have been considered of minor importance but which, in the light of our knowledge of cranial stress as outlined by Eardley Holland, have acquired significance. The first condition is known as "moulding of the head." If, in the moulding there is extreme elongation in one direction, with a proportionate shortening in another, there will be an overlapping of the bones, leading to brain pressure and not infrequently, to rupture of the small veins that enter the longitudinal or other sinuses. At the outlet, the elongated head meets with the resistance of the pelvic floor and is pressed in such a way that the stress comes more or less suddenly from a different direction, thus leading to rupture of the falx or tentorium. This parity between the size of the head and canal leads to moulding. In spontaneous deliveries, abnormal pressure is probably the cause of stillbirths from cerebral hemorrhage.

Denting of the frontal or parietal bone is another minor injury and is the result of labor in a flat pelvis. The promontory causes a depression as the head slides through the true conjugate. If the concavity thus produced in the skull is great enough it may give pressure symptoms or it may hinder the natural development of the bone. Occasionally the inner table of the bone is cracked at the high point of indentation and hemorrhage has occurred beneath the dura. A piece of bone may become displaced or an edge may produce injury to underlying structures. Deep indentations are usually the result of severe trauma, high forceps, or forceps on aftercoming head, as in breech delivery. However, there are cases reported in spontaneous or fulminating labor of seemingly normal delivery. This may be due to faulty ossification.

In 1861, Little, from a study of a group of cases of spastic paraplegia, decided that the obstetrical history was of great importance. He intimated that difficult labor with operative delivery was the cause of cerebral hemorrhage affecting the motor areas, but he also noticed that these hemorrhages occurred in children who were born spontaneously and that many of the cases in the latter group were premature births. He therefore came to the conclusion that asphyxia, with consequent rise in pressure and filling of the veins, had a great deal to do with their rupture. Virchow pointed out that the veins of the cortex have little support as they enter the sinuses and in recent times Cushing has mentioned this peculiar anatomic condition and agrees with Little that asphyxia neonatorum may lead to rupture of cerebral veins just as this condition sometimes occurs in the asphyxia from spasms of whooping cough.

Intracranial Injuries. Most important are the injuries caused by trauma of birth to the brain and meninges. If severe, the child is stillborn or dies soon after birth. Small hemorrhage may pass undiscovered but in every case of hemorrhage from the mucous membrane, cerebral hemorrhage is a possibility. There may be hemorrhagic diathesis, noticed by a widening of sutures, or bulging of a fontanel, although the frontal fontanel may be normal if hemorrhage is subtentorial. The infant cries almost incessantly, which may be due to pain caused by stretching of the dura. Vasomotor pallor may be noticeable, although cyanosis is more common. Convulsions, intracranial pressure of the tonic or clonic type, rolling of the eyes, and twitching of the face are all common symptoms.

Injuries to the spinal cord may be luxation of vertebrae. Hemorrhage by trauma and ruptured cord may be caused by version extraction or possibly by faulty manipulation during resuscitation. In seventy-five postmortems, Stoltz found nine lacerations of the capsule between cervical vertebrae and only one of the vertex. Convaliare reports that it is difficult to determine whether hemorrhage of the cord and medulla may be caused by elongation from manual breech extraction, or by

compression of forceps or maternal parts. Other authors give hemorrhage as the cause of five-sixths of the stillborn births in breech deliveries.

Injuries of Extremities. (1) Fracture of the clavicle occurs in about one and one-half per cent of all deliveries, according to Ehrenfest. This happens in aftercoming head deliveries by a finger slipping over the clavicle, or by bringing down an arm in vertex deliveries. It may happen in a contracted pelvis. (2) Fracture of the *upper* arm is not as frequent as in former years, due to "better obstetrics." It may occur in the middle and upper third. Epiphysical separation may and does occur with improper traction, when delivering the arms in breech deliveries.

Nerve injuries, which are frequent, are those to the fifth and sixth cervical nerves, known as Erbs Paralysis or brachial palsy. This occurs in one out of one thousand deliveries with difficult shoulder delivery.

Facial paralysis is caused by forceps or pressure near sternomastoid. It may also be caused by intracranial injury, hemorrhage or rupture of the tentorium. Thirty-six cases have been reported in spontaneous delivery.

Case Report

DIABETES MELLITUS:

A Case Showing High Blood Sugar, Insulin Resistance, and the Effect of an Infection upon the Carbohydrate Tolerance.*

F. Lowell Dunn, M.D., Omaha

From the Department of Clinical Research, University of Nebraska College of Medicine.

The case presented is of the mild or so-called peripheral type of diabetes and illustrates the following points: (1) the value of alkali reserve determinations as a measure of the severity of an acidosis; (2) the effect of an infection upon an otherwise mild diabetes; (3) the deception of urinary tests in the presence of kidney damage; (4) the fact that this type of diabetes is not due to an insulin-lack in the body but to some other factor which slows down the oxidation of carbohydrates or increases its excretion; (5) high blood sugar without death.

The patient, a negro laborer, aged fifty-seven, was admitted to the University Hospital, October 3, 1927. Two weeks before admission he had had two teeth pulled. His throat and gums became quite sore, he couldn't eat and lost his appetite. He said that his weight dropped from 222 to 173 pounds. He noted that his vision blurred and that he tired easily. He admitted that he was more thirsty than usual but not markedly so and there was no polyuria. He thought that he had recently been a little short of breath.

The patient lay quietly and flat in bed. He was drowsy and somewhat confused, but could be aroused. Respirations were 30 but not typically Kussmaul in type. The pharynx was injected and edematous. The sites of the recent extractions contained frank pus. There was some edema of the right ankle, which was tender. The pulse was 112 and regular. The admission temperature was 97.2, but during the first six days he ran a febrile course, the temperature reaching 102 on the third day and returning to normal by the sixth, where it remained. There was a localized osteomyelitis of the jaw which was treated by irrigations and later by partial alveolectomies without interfering with the patient's convalescence.

The admission urine showed about 5 per cent sugar without albumin and with a small amount of acetone but no diacetic acid. The absence of diacetic acid in the urine raised the question as to whether or not the patient's condition was due to an acidosis. An alkali reserve test was run, giving value of 28 volumes per cent or about one-half of the normal value, indicating that the patient had an acidosis of moderately severe grade and also a kidney involvement obstructing the excretion of diacetic acid.

Further blood chemistry determinations were made for other indications of retention. The blood sugar was 1490 milligrams per 100 c. c. or 1.5 per cent sugar. Such elevations are very rare and probably do not occur except in the presence of decreased renal permeability. The non-protein nitrogen was 128 mgms., creatinine 3.4, and uric acid 19.7 mgms. The 'phthalein output was only 28 per cent in two hours.

Insulin and some alkali promptly raised the alkali reserve to 70.0 volumes per cent and the patient appeared somewhat brighter. He gradually returned to feeling alert within the following three to four days.

It is interesting to note that with the disappearance of fever, but more particularly after removal of the mouth infection, the patient's fasting blood sugar went down to normal values, such as 96 and 101 mgms.

In studying the relation between the total carbohydrate intake (calculated by the Woodyatt formula) and the urinary sugar the ineffectiveness of insulin was striking. Ordinarily one unit of insulin should take care of about one gram of glucose. Here glucosurias of 20 grams were present

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with insulin doses of 100 to 120 units per day on a diet with a total G of only 70. The patient at no time had an insulin reaction characteristic of this type of diabetes.

As a further confirmation of the ineffectiveness of insulin, while the patient was on a constant total glucose intake of 120 G we dropped the insulin from 90 units to 0. On the last day on which he received 90 units he excreted 17.8 grams and the two following days when he received no insulin he excreted 15.1 and 16.8 grams. A glucosuria of this type does not appear to be due to an insulin-lack but rather to some other defect in sugar metabolism. The lack of response to injected insulin is characteristic of this diabetes mellitus group referred to as "mild," "elderly," or "peripheral" diabetes.

Attempts to desugarize the patient by the use of insulin and by reduction in diet were ineffective even with such combinations as 120 units of insulin and a total G of 70. However, as the infection in the mouth subsided, the patient desugarized without insulin in the third week and remained sugar free while the diet was raised to a total G of 178. Paralleling this improvement in tolerance, the phenolsulphonephthalein test rose from 28 to 42 per cent for two hour periods and the non-protein nitrogen dropped from 128 to 27 mgms.

1530 Medical Arts Building.

College of Medicine
State University of Iowa

(From the Proceedings of the University Hospital Medical Society.)

PRODUCTION OF PROTEOSE TOXIC FRACTION AND THE EFFECT OF DIVERTING PORTAL CIRCULATION UPON ITS TOXICITY

J. T. McClintock, M.D.

From the Department of Physiology

It is a well recognized fact that a toxic substance can be extracted from the intestinal mucosa of an animal dying from intestinal obstruction. Most workers, however, have failed to obtain the toxic material from the intestinal mucosa of normal animals. By compounding the mucosa of as many as four normal animals, we have been able to extract the toxic material in lethal quantities. It therefore seems that the material extracted is not peculiar to the condition of strangulation obstruction, but is normally present in small amounts and under condition of obstruction is either produced in greater quantities or the condition is one which favors its accumulation.

We have also extracted from autolized tissue other than the intestines a toxic material which gives the same clinical and pathologic changes when injected into normal animals as does that obtained from the mucosa of cases of intestinal obstruction. In all cases the autolysis required the presence of bacteria in order to produce the material in lethal quantities. We are inclined to the opinion, therefore, that bacterial action is necessary, but our experiments are not positive proof.

One of the characteristic pathologic changes produced by the toxic material injected into normal animals is the bloody diarrhea and the hemorrhagic condition of the mucosa of the small intestines. This is similar to the condition produced in portal occlusion by ligation. It seems possible that the action of the toxic material might be that of causing a portal occlusion. Four dogs were operated upon and the portal circulation diverted through collaterals directly into the systemic circulation. Into these animals a lethal dose of toxic material was injected and three animals survived the injection without showing any symptoms. All control animals died within ten hours and with all the characteristic symptoms and pathologic changes. It therefore would seem that in a certain percentage of the cases the fatal results from injection of the toxic proteose can be prevented by diverting the portal circulation directly away from the liver. Further experiments are in process to more specifically locate the action of the toxic material.

SCHILDER'S DISEASE.—(PERIAXIALIS ENCEPHALITIS DIFFUSA)*

Report of a Living Case

Mark L. Floyd, M.D.

From the Department of Pediatrics

The first living case of periaxialis encephalitis diffusa was reported and presented in 1924 by Collier and Greenfield[1] and later at death the diagnosis was confirmed by necropsy. Very few living cases have since been reported. The majority of patients with the disease are misdiagnosed, usually as tumor, spastic paralysis, or some vague brain disorder. Reports indicate that Schilder described his case as a well-outlined yet diffuse, subcortical, symmetrical involvement of the white matter. He published four other previous cases towards which his attention had been directed.

Schilder's case[2] was a 14 year old girl who complained of poor vision. There was associated vomiting, headache and a deteriorating mental state. Examination showed altitudinal hemianopsia, slight papilledema and a positive Wassermann reaction. Four weeks later light perceptions were lost but pupils reacted. Complete hemiplegia and aphasia followed along with amentia and emaciation. The duration of the disease was five and one-half months. At necropsy the lesion was found to involve the occipital white centers bilaterally and extended forward more on the left side to the left temporal and left central white centers, leaving those on the right side relatively intact; it was therefore a hemiplegic spastic paralysis instead of a diplegic spastic paralysis.

By 1924 more substantial facts were gathered concerning Schilder's disease, among which it was learned that occasionally the eyeground findings were variable, the extension in the white substance of the brain, though bilateral, could be more on one side, the optic chiasma, optic nerve and spinal cord had been found involved and a high percentage of patients were young subjects.

Collier and Greenfield have been credited with publishing the first English report of diffuse periaxial encephalitis, but a similar article by Bouman[3] appeared simultaneously. The former described the condition as occurring in children and young persons, with an onset of a few days, occasional remissions, and a course varying from a few months to three years. Chief symptoms were cerebral blindness (occipital), becoming complete, mental reduction and increasing spastic paralysis. Deafness could occur. Amentia passed through coma to death.

Of about seventy-five probable causes of Schilder's disease reported to date, 27 per cent occurred within the first five years, 16 per cent between 5 and 10 years, 7 per cent each between 10 and 15, and 15 and 20 years, dwindling downward thereafter. The onset appears variable, either acute or gradual. There is no record of trauma, disease or injury at birth. Blindness is partial or complete, cerebral in type with optic atrophy. Central deafness may occur. Hallucinations, screaming, headache, vomiting, loss of memory, disorientation, or dementia usually block a more delicate examination. A detailed report by Bouman, however, shows that superficial and deep reflexes and pupil reactions are variable. Paralysis is spastic in type. Convulsions may occur. In some patients an optic neuritis or mild papilledema has been observed, resulting in a diagnosis of tumor. When the disease begins posteriorly, mental symptoms appear late. Often there is apyrexia.

Pathologic findings are of a definite type but at times variable in location. A recent case of Schilder's disease who came to necropsy at this clinic and was reported by Budd[4] showed a brain which felt peculiarly hard and firm through the layer of soft gray matter while in the unfixed state. Grinker in Gasul's report[5] describes the sectioned brain as consisting of bilateral, symmetrical softenings limited to the white substance, in which the myelin sheaths and axis cylinders are alike affected with proliferation and degeneration of astrocytes. Collins and Greenfield state that the white matter of the occipital lobes is affected first, while that of the frontal and temporal lobes seems the last to be involved. Microscopically, the myelin sheaths show degeneration and destruction, are beady, radiate downward, and are surrounded with multinuclear scavenger cells. Perivascular spaces are crowded with lymphocytes.

The following report is of a patient now living who was first seen in the pediatric department at the Children's Hospital in June, 1930, and later in November, 1930. A diagnosis of periaxial encephalitis diffusa has been given:

Patient, No. E4535. Age, 20 months.

Complaint: Stiffness, fever, loss of weight, contracted hands.

Illness: The mother is emphatic in stating that patient was normal in every respect until the age of nine months. The patient had a normal birth, thrived, grasped objects and sat alone at six months, would "Bye-Bye" at seven months, and at nine months weighed eighteen pounds.

At nine months of age, patient became unable to sit alone because of stiffened limbs. He could no longer grasp objects because the hands were clenched. Four months later he was worse, being fretful, irritable and stiff; he vomited frequently. Five months after the onset, two convulsions occurred. Patient was now failing in weight.

Examination in the hospital showed apyrexia, mild anemia, leucocytes 7000, urine negative, closed fontanels, blind fascies, impaired hearing. A previous spinal puncture revealed a normal fluid. Blood phosphorous and blood calcium were normal. Spinal and blood Wassermann were negative. Head and chest measurements coincided. Examination of the eyegrounds at this time showed bilateral primary atrophy 2D.

When again seen five months later the patient appeared feeble minded, was whiney, irritable and cried shrilly when disturbed by sound, light or jarring. Spasticity was increased markedly, to-

gether with "scissors legs." Deep reflexes were changeable.

The principal points about this patient are that the birth and early life were normal to nine months, at which time the disease began with an abrupt onset, cerebral in type, retrogressive in nature, and causing a loss of all normal and cultivated activities. Cerebral blindness was found and deafness was developing. No localizing symptoms could be found.

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THE INACCURACY OF THE DIAGNOSIS OF TUBERCULOSIS OF BONE, JOINT, BURSAE*

J. E. Milgram, M.S., M.D.

From the Department of Orthopedic Surgery

We bring up the time-worn subject of the clinical diagnosis of surgical joint, bone, bursa tuberculosis to reassure ourselves that the clinical diagnosis of bone tuberculosis is still to be made with much caution, is still to be regarded with suspicion and is to be accepted as an indisputable fact only when it has been checked by pathologic section and the demonstration of the tubercle bacillus.

Two schools of treatment in tuberculosis are arrayed today. One, let us pay it a gratuitous compliment by terming it conservative, maintains that the best and most permanent results in tuberculous joints are obtainable by simple bedrest. It urges fixation of the part by splints, casts, or mechanical devices. The other school, which objects to the name of radical, insists that such local fixation is ineffective. It urges that the percentage of truly tuberculous joints which heal with good function and without recurrences is so small as to be almost negligible. It therefore fuses the articulation by operation, obtaining positive rest.

The conservative group prints statistics of its material. In the great majority of cases pathologic proof of the lesion is absent. This is to be expected in the nature of the treatment. The operative school disbelieve their figures and maintain that these best cases were probably never tuberculous. They have contrasted their own material in which resected tissue was subjected to pathological examination; and have denied the value of clinically diagnosed lesions in any comparison of end-results of treatment.

The conservatives, most of whom are found in the older European clinics, indignantly repudiate the claim that their cases may not all be tuberculous. They are angered at the gentle imputation that clinical statistics of tuberculosis are hardly worth the paper they occupy. They maintain stoutly that scrofulous lesions in bones and joints were correctly diagnosed long before the tubercle bacillus was recognized. They insist that the clinical picture is quite well delineated, and that diagnosis can be made with assurance. Into this controversy we shall not further enter except to say that in a recent number of the Munich Medical Weekly a report appears on 107 cases of proven tuberculosis in which the findings parallel our own most closely.

We have in our files today 822 patients which the department has treated or is treating for tuberculosis. From this group, from time to time, patients have been subtracted and labelled with non-tuberculous syndromes. The case of Perthes' disease may be taken in point. This self-limited, non-pyogenic destructive lesion of the hip joint heals spontaneously within a period of two to two and one-half years, leaving an excellent hip—one frequently hardly recognizable from a normal hip. Early in the syndrome it is very regularly diagnosed as tuberculosis. Later, the X-ray changes become almost pathognomonic. A large proportion of our eighty odd cases of Perthes' disease were early termed tuberculosis. Perthes' disease was not recognized prior to 1910. Consequently, all of the statistics of tuberculosis of the hip, prior to 1910, include cases of this syndrome (often as perfect results of treatment). Our few cases of actinomycosis, typhoid spine, and some of our osteomyelitis of the vertebral bodies, found themselves first in this clinical group. They were not correctly segregated until the etiologic organism was demonstrable. For obvious reasons, it therefore seemed rational *not* to analyze the larger group of 822 patients in this connection but to consider the *smaller* material of 139 instances of proven tuberculosis.

The points of particular interest were:

1. Was the diagnosis made before operation?

2. Did the reason for the mistake appear in unusual clinical findings and history? In other words, did it seem likely that such a blunder would be repeated, were a twin case encountered?

* Delivered at the November meeting of the Hospital Medical Society.

3. Was an incorrectly diagnosed case recognized at operation by competent surgeons?

Answered briefly, the following information was gathered from this group of 139 cases.

1. Of 139 cases of proven tuberculosis a total of 54 or 38.6 per cent were incorrectly diagnosed before operation and subsequent pathologic section established the diagnosis.

2. The reason for this inaccuracy was readily found in the remarkable variety of atypical clinical pictures which this group presented. Thus, 29.5 per cent of the 139 cases were sudden and severe in onset. Of these 63.2 per cent were incorrectly diagnosed. Similarly, 34 patients presented on admission multiple osseous, joint or synovial lesions instead of classic mono-articular disease. In 51 cases the X-ray findings were of no aid, or completely misleading, even on examination after pathologic diagnosis had been established. In nine cases of tuberculosis of the shaft of long bones, the diagnosis of osteomyelitis or Brodie's abscess was made in each. As far as the tuberculin test is concerned, a negative reaction was obtained in 18 proven cases. On reviewing the cases, it became painfully apparent that, were the great majority of these patients again to appear for diagnosis, our percentage of accuracy would be very little better. In short, it was very obvious that the textbook clinical picture of surgical tuberculosis is incorrect in 40 per cent of the material encountered. These statistics correspond very closely to the few similar series reported in the literature.

3. In the group of 54 clinically unrecognized cases of tuberculosis, 34 lesions were examined at operation and still labelled non-tuberculous, only to have pathologic proof correct the operative opinion. When the trained pathologist is unable to distinguish grossly chronic inflammation from tuberculous inflammaton, it is to be expected that the surgeon will fare no better at the operative table. The classic picture of caseation and the visible tubercle is too frequently absent in just the early group which today is beginning to appear for therapy.

In conclusion, will the clinical diagnosis be any better in the future? We doubt it very much.

The body has but few ways in which to react; all we see in a patient is one of its reactions. Anyone of a number of organisms may call forth this response in a patient. Can one always recognize the organism from this common denomination? Thus, a certain organism produces a tremendously acute reaction in John Jones; he succumbs overwhelmed by miliary tuberculosis. A similar organism produces miliary tuberculosis with the same extensive dissemination in Sam Smith, but the latter walks into the clinic feeling simply "out of sorts" to the astonishment of the examiner.

One patient with a tuberculous knee develops marked muscle spasm; the next plods along for years with little or no restriction of motion. One has to take to bed at once with severe pain; the other has none to speak of for years in the presence of considerable destruction of the joint. We still lack the clinical ability to evaluate organism and host.

Last week, a child of twelve appeared with her mother. The patient has suffered from a destructive lesion of the left hip for seven years. She has been in almost every clinic of the mid-west, seeking diagnosis and treatment. For the first three years no diagnosis was made. Four years ago she was approached for a biopsy to settle the diagnosis so that a definite plan of treatment could be outlined. She refused, as she now states, because, "they treated her child for three years without making sure of what it was." She has lost faith in physicians because, as she says, every doctor told her it was something else and advised treatment accordingly. Confused, she has consistently done nothing—and not even that well. The child has had no real trial of any treatment.

The diagnosis of bone tuberculosis is of particular importance because its persistence and long duration implies that the patient will have to allot a considerable part of his or her life attending to it. If doctor and patient are both sure of what the condition is, they can proceed to do their best. If not sure, hesitation in the mind of the physician is rapidly reflected in distrust on the part of the patient.

We urge every case of suspected tuberculosis to be routinely subjected to pathologic verification wherever it is at all possible to safely obtain tissue or pus. In the operating room the gross appearance is frequently misleading. Frozen sections are employed with success in certain clinics where operative fusion of the joint is routinely performed, if the sections reveal apparent tuberculosis. Chronic osteomyelitis foci, if unusually persistent, should be examined for tuberculosis, for diaphyseal lesions are regularly treated as pyogenic osteomyelitis. After the first operation, the secondary infective organism may mask the basic picture completely.

How many patients of the 883 termed tuberculous may in reality be quite incorrectly labelled, is a matter for conjecture. Until a correct clinical picture of tuberculosis is painted, in a hypothetical surgical milennium, the guinea pig, potato culture and miscroscope must apparently be our guides.

State Health Commissioner's Page

D. C. Strickland, M.D.

TOO MUCH SCARLET FEVER

Reports made to this office indicate that the coming winter will be productive of a great number of cases of scarlet fever. The following table will indicate the progressive increase in this disease yearly since 1924.

CASES OF SCARLET FEVER

Year	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1924	268	275	287	207	63	137	45	29	73	133	160	215	1892
1925	265	187	132	131	112	42	24	28	48	165	211	216	1561
1926	295	250	233	232	133	114	76	54	60	177	220	280	2124
1927	310	339	377	197	125	115	73	45	48	148	227	314	2318
1928	368	416	343	274	233	135	69	51	96	192	344	377	2898
1929	544	676	865	583	499	186	94	53	86	221	209	299	4315
1930	378	441	406	331	248	111	36	27	94	170	256	338	2836
Total	2428	2584	2643	1955	1413	840	417	287	505	1206	1627	2039	17944
Average	347	369	378	279	202	120	60	41	72	172	232	291	2563

Four thousand three hundred fifteen cases of scarlet fever were reported during the year 1929. This number of cases resulted in the loss of 120,820 days, 17,260 weeks, or 332 years of time spent in quarantine by children infected with the disease. Two thousand four hundred ninety-eight cases have been reported thus far in 1930. One reason for the large number of cases is that the disease is relatively mild and many cases are not seen by a doctor. These cases remain at home three or four days while the process is acute and then return to school. In many instances the rash is so fleeting as to escape notice. Many cases are "missed" even when seen by a doctor because the symptoms are so slight. By experiment it has been determined that the majority of such cases and those which make an early and apparently perfect recovery remain carriers of the streptococcus of scarlet fever for four weeks and even for five or six weeks. Such children are more of a menace than those with frank cases of the disease for the reason that they are not subjected to quarantine. Physicians are warned to scrutinize the mild case of scarlet fever before making a diagnosis of "stomach rash" or scarlatina, etc., and before allowing the child to return to school sooner than the end of the proper quarantine period. In all cases "scarlatina" is scarlet fever and should be handled as such by the local health officer in accordance with the rules and regulations of this department. When cases of scarlet fever appear in a community a diagnosis of scarlet fever should be made in every instance where there are present nausea, vomiting, sore throat, fever and rash, however slight and transitory the last may be. Fifty-eight deaths from scarlet fever occurred in 1929, and while the case fatality rate is relatively low, this does not account for the large number of apparently mild attacks which were accompanied by complications and even permanent damage.

The following policy regarding the use of scarlet fever toxin for immunization and scarlet fever antitoxin for treatment is recommended by this department.

The Rules and Regulations of this Department require that a case of scarlet fever must remain in quarantine at least 28 days and that when there is discharge from ears or glands at the end of that period, quarantine must be extended until all dis-

(Continued on page 39)

The JOURNAL of the Iowa State Medical Society

ISSUED MONTHLY

RALPH R. SIMMONS, Editor.....Des Moines

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A NEW YEAR'S REFLECTION

People in many sections of the globe during the past year have been torn by war and cursed by famine; poverty has visited many lands and taken a mighty toll of human life and more especially human happiness; political upheaval and revolt have engulfed many nations and engendered hatred which will remain for a generation; world safety has been threatened by radicalism and strife; yet America and particularly people of our own midwest can look upon the year of 1930 as one marked by prosperity and much personal happiness. Economic stress has been felt in some sections and unstable business enterprises have failed but poverty and want has not become apparent. The basic factors in national and personal prosperity have remained unshaken and personal and community health advanced by science. Standing upon the threshold of a new year let us look back upon the past twelve months and view alike our accomplishments and failures and, with this background of experience, resolve for achievements and progress which will assure even greater accomplishments in the furtherance of human happiness during the new year.

During the past year humanity has been blessed by many discoveries and developments in medical science and practice. There is scarcely a branch of medicine which has not felt the touch of the magic wand of research. Millions of dollars have been spent in the furtherance of knowledge concerning disease and in bringing relief to thousands of sufferers. The dreadful but baffling disease—cancer—has been accorded a foremost place in scientific attention and while to this date specific cause and cure for this disease is undiscovered much progress has been made in the development of those methods of treatment which bring complete relief to a considerable number of those of the vast army of sufferers who intelligently seek relief in time. Dollars and energy have not been spared in the education of the public to the early signs and symptoms of cancer, tuberculosis and heart disease—the triumvirate responsible for so much suffering and so many deaths. The past year has seen marked activity in an organized movement to prevent economic loss from injury and accidents. National organizations interested in nervous and mental conditions have combined to make more effective their work in the investigation and treatment of these diseases. A national congress for the consideration of problems affecting the health of children has held a successful session with government approval and encouragement. Announcement has been made of developments in the treatment of diabetes and pernicious anemia. Addison's disease has been successfully combated and epilepsy can now be controlled.

In our own medical organization 1930 has been an outstanding year. The program of business managership has been continued and again has carried the affairs of the society through a year of busy activity without exceeding its budget. The annual meeting of the society in Marshalltown was one of the most inspiring scientific sessions in many years and because of the fine attendance eminently satisfactory in a fraternal way. A decided gain has been noted in county society activities in practically every section. The Speakers Bureau has been organized and has launched its work on a carefully planned program. Due to the excellent work of the Legislative Committee and that of the Committee on Medical Education and Hospitals, data are at hand and plans formulated to support a constructive legislative program before the General Assembly which convenes in January. Certainly among the attainments and accomplishments of the year should be mentioned that fine feeling of fraternalism which has prevailed throughout the members of our society as reflected by a greater number of worth while scientific meetings, increased attention to medical economics, and problems of public health.

When we build, let us think that we build forever. Let it not be for present delight nor for present use alone. Let it be such work as our descendants will thank us for, and let us think, as we lay stone on stone, that a time is to come when those stones will be held sacred because our hands have touched them, and that men will say, as they look upon the labor and wrought substance of them, "See, this our fathers did for us."—JOHN RUSKIN.

Nephrology

V. HYPERTENSIVE RENAL DISEASE

CHRONIC INTERSTITIAL NEPHRITIS

Recent studies of hypertension on the one hand and of renal disease on the other have disclosed a definite relation between the kidney diseases and high blood pressure. It is now possible to epitomize our knowledge of this relation as follows:

Given a heart capable of elevating the blood pressure and maintaining it at an abnormally high level, hypertension will be present whenever there is a significant obstruction to the renal circulation, regardless of the cause. Approximately 10 per cent of the hypertension which is observed clinically is secondary to pathologic changes within the kidney. The other 90 per cent belongs to the hereditary type of this disease. Hypertension *per se* leads to changes in the arterioles throughout the body and when these are pronounced in the kidneys, they, in turn, cause further elevation of the blood pressure which may result in renal insufficiency or uremia. This phase of hypertension was formerly known as "chronic interstitial nephritis" and is responsible for 5 to 10 per cent of all deaths from hypertension.

The morbid anatomy, the symptoms and the treatment of this condition will be considered in this, the concluding article on Bright's disease.

MORBID ANATOMY

The changes to be described are present in practically every case of hypertension that has existed for any length of time. The degree of involvement is dependent upon the age of the individual, the height of the blood pressure and upon many factors which are wholly unknown at the present time. The primary changes occur in the small arteries and in the arterioles. The changes in the small arteries cause proliferation and splitting up of the elastic tissue, leading to a narrowing and sometimes eventual obliteration of the lumen. In the arterioles, there is a subintimal deposit of hyalin material which may cause obliteration of the lumen of the involved arterioles. This hyalin deposit often extends into the glomeruli.

As has already been stated, these changes lead to marked interference with the blood supply of the kidney and hence to the further elevation of the blood pressure. In addition, they are responsible for secondary changes in the glomeruli, in the tubules and in the adjacent interstitial tissues. Owing to the lack of blood supply, the glomerular loops collapse and disintegrate, one after another, so that the end result is a shrunken, bloodless, uncellular ball.

While these changes are taking place in the glomeruli, similar changes occur in the convoluted tubules and in the capillaries supplying them. Since the convoluted tubules are dependent entirely upon the blood which reaches them after it has passed through the glomeruli, the changes in the affected tubules are always more pronounced than in the glomeruli of the units. One by one, the capillaries around the convoluted tubules collapse and undergo fibrosis and the tubules atrophy. The fibrotic changes in the interstitial tissues frequently close the lumen of the convoluted tubules, while the glomeruli are still functioning. The glomerular filtrate then causes distension of the tubules, resulting in widely dilated tubules, and cysts. Thus, gradually, the renal units are destroyed and are replaced by contracting fibrous tissue. The reserve of the kidney is also progressively reduced and when approximately two-thirds of the functioning tissue is destroyed, renal insufficiency results.

In a certain portion of patients with hypertension, a malignant phase of the disease is superimposed upon the changes described. The cause of this change for the worse is unknown, but a generalized progressive obliteration of the small arteries and arterioles occurs, with necrosis of the vessels distal to the obliteration and necrosis of the tissue supplied by the affected vessels. Such necrosis often occurs relatively early in the life of the hypertensive patient and always leads to uremia and death. The changes occur throughout the body and may be studied during life in the retina, where they give rise to the malignant form of albuminuric retinitis pathognomonic of the disease. At autopsy, the kidney reveals gross changes characteristic of the disease best described as multiple diffuse infarctions.

SYMPTOMS

The symptoms are those of hypertension in general, to which are added the symptoms resulting from the kidney lesions. In the early stages of hypertension there are no renal symptoms referable to the high blood pressure. As the blood pressure mounts, however, these symptoms appear. The first is an increased output of water from the kidneys, which is brought about by the increased pressure in the functioning glomeruli rushing the filtered blood along the convoluted tubules so fast that normal renal absorption cannot take place. At times when the blood pressure level is unusually high, albumin, hyalin and granular casts and even blood cells may occur in the urine, due to the increased pressure. The first urinary symptom of impending renal insufficiency is a fixed specific gravity. This is due to the fact that the pathologic changes are always more ad-

vanced in the renal tubules than in the glomeruli. Many test diets have been devised to bring out this lack of concentration, but none of them is needed. The fixation of specific gravity may be clearly observed with the individual on an ordinary diet by taking a number of specimens daily.

The second change found in the urine indicative of renal insufficiency is a lessened output of protein metabolites, which occurs in spite of the fact that the water output remains high. When the output of these substances is diminished, they accumulate in the blood and manifest themselves as increased blood urea, blood uric acid, etc. Hand in hand with this, there is usually a decreased phthalein output, but for all practical purposes the clinical test for increased blood urea is the most reliable and the simplest to perform. In the beginning, this increase of blood urea occurs only during infections or following over-eating, but eventually it mounts higher and higher, to reach 200 mgs. per 100 c.c. of blood, or even more, before death occurs.

In the meantime, the hypertensive changes in the rest of the body have been progressing *pari passu* with the renal changes. The blood pressure has been steadily increasing to reach its highest peak and recede from it; the heart has been enlarging and dilating; the skin, usually ruddy at first, has changed to the atrophic, bloodless skin of Volhardt's "white hypertension"; the muscles have grown atrophic; digestive organs have been failing and diabetes may have appeared. The retinal changes have progressed and in the malignant form, the edema of the disc and the retina, the hemorrhages and thrombosis, with characteristic patches of exudate, have appeared. The symptoms characteristic of hypertension—encephalopathy, headache, convulsions, delirium and dizziness have come and gone, hemorrhages may have occurred, senile deterioration of mentality may have taken place. In other words, the organic deficiency is general and with this, a marked secondary anemia has developed in the blood.

Finally, the symptoms of true uremia make their appearance. These are progressive atrophy, mental and physical anorexia, nausea and vomiting, a dirty appearance of the skin, uriniferous odor, intense headache displaced by stupor and coma, occasional delirium and muscular twitching, but rarely convulsions. At times, the picture of acidosis is added and the individual dies from a combination of renal, cadiac and general organic failure.

DIAGNOSIS

The diagnosis of hypertensive renal disease is simple and is made certain by the finding of elevated blood urea.

TREATMENT

The prophylactic treatment of this condition is the same as that of hypertension and, in a nutshell, consists of reducing the load put upon the heart to as nearly normal proportions as possible; by longer periods of rest and more frequent vacations, and by reduction of weight in the obese. During the treatment of hypertension, the urine must be watched and periodic blood examinations must be made to determine the blood urea level. When this level reaches the upper normal, the real treatment of hypertensive renal disease begins. This consists of relieving the kidneys, so far as possible, first, by limiting the protein intake per twenty-four hours to somewhere between one-half and one gram per kilogram of body weight, or an even further reduction for shorter periods of time. The protein should be given in the form most suited to the patient's taste and need. Meat is as suitable protein for human nutrition as we have and there is no difference between red and white meat. Hence, the only essential, so far as diet is concerned, is to limit the protein to the amount mentioned above and to feed the individual easily assimilable food in moderate quantities. On account of the precarious condition of the gastro-intestinal tract, it is better to give four or five smaller meals per day than three larger ones. The practice of forcing fluids is unsound and illogical. The patient should be given the amount of fluid he needs to keep him comfortable and no more. The skin should be stimulated as much as possible by sweat baths. These are to be given daily if the need is imperative and every second day if the patient is in no immediate danger. I am convinced that more harm than good comes from inducing sweating by the use of pilocarpin. The easiest and most pleasant way of promoting sweating is for the patient to take a hot bath and wrap himself in woolens in a warm bed. The bowels should be kept open and loose by small doses of salts. Large doses, producing purging, often do more harm than good.

Some have advocated blood transfusion for the severe anemia which is present in some cases, but the benefit of this is only temporary. The use of iron is at least harmless and may conceivably be beneficial. Diuretics are of questionable value in any form of Bright's disease; they are apparently of no value whatsoever in the prevention or relief of uremia. Digitalis in appropriate doses is indicated and I have often seen definite, beneficial results from its administration. Certainly the patient is entitled to relief from restlessness, headache and sleeplessness by the administration of sedatives and analgesics in the proper doses.

—DANIEL J. GLOMSET, M.D., Des Moines.

DOCTOR RUTH—THE SURGEON

Our friend and colleague whose death occurred on December 11, 1930, lived during an interesting period of advancement in surgical knowledge. When he was admitted to practice in 1883, bacteriology in its application to antisepsis and asepsis was quite unknown. It was his privilege to witness and contribute his part to the remarkable achievements of surgery during the past fifty years.

He entered the field of operative surgery through the avenue of anatomy, having been an inspiring teacher of descriptive and applied anatomy for many years in the Keokuk Medical College. His intimate knowledge of anatomic structure best explains his success in operations for the removal of Gasserian ganglion, extensive malignant growths of the face, neck, and the mammary gland as well as the treatment of all forms of fractures.

Ths distinct contribution of Doctor Ruth to the surgery of the period was his development of a method for the treatment of intrascapular fractures of the femur. This is usually referred to as the Maxwell-Ruth method, also as the anatomical method, since it is based on the principle of longitudinal and lateral extension. Neither Doctor Maxwell or Doctor Ruth claimed the method as original, since it was first proposed by Dr. G. W. Phillips of Dixon, Illinois, and published in the *American Journal of Medical Sciences* in October, 1869. Dr. T. J. Maxwell, later professor of surgery in the Keokuk Medical College, but at the time a practicing surgeon at Olena, Illinois, published his first article on the subject in the Chicago *Medical Journal and Examiner* in May, 1876. Dr. Ruth should be credited with many important changes in the method and its extensive application with most successful results as regards complete restoration of function, even in patients of the seventh and eighth decades of life.

The record of Doctor Ruth in military surgery deserves creditable mention. During the Spanish-American war he served as Major of Volunteers, Medical Corps at Camp Chicamauga. In 1916 he was commissioned a lieutenant in the Medical Rereserve Corps, and ordered to active duty as Sanitary Officer in June, 1917, at the beginning of the construction of Camp Dodge. In the hot days of July and August when a cantonment for 45,000 soldiers displaced a cornfield, the flies and mosquitoes were everywhere abundant, and yet not a single instance of typhoid or malarial infection developed during the erection of this cantonment. During all of this period Doctor Ruth held the rank of first lieutenant with officers of higher rank serving under his command.

When this was called to the attention of Major Victor C. Vaughan in charge of the personnel division in Washington, the appointment of Major Ruth was promptly forwarded by telegraph. With the organization of the Hospital at Camp Dodge, he was made Chief Surgeon serving until December, 1917, when he was transferred to Fort Riley remaining until February, 1918, after which he was ordered to Fort McHenry. In July, 1918, he was transferred to Fort William McKinley, Manilla, P. I., later promoted to Commanding Officer of the Hospital. He was discharged in April, 1919, and promoted to Lieutenant Colonel in the Medical Reserve Corps. In 1930 he was promoted to the rank of Colonel.

We will all remember our departed colleague for his fine ethical character, unbounded energy, conscientious devotion to his patients, as a public spirited citizen, and earnest worker in the cause of human welfare.

NORMAN BAKER'S ACTIVITIES

Many readers of the Journal have more than passing interest in the activities of Norman Baker, of Muscatine, notorious for his vitriolic attacks upon the medical profession, the American Medical Association, his former partner one Harry Hoxsey, The Muscatine *Journal* and, in fact, anything or anybody who opposes him. His activities have carried him into many fields and given him widely diversified interests. He first received public notice when by means of Radio Station KTNT he advised the world that he had solved the mystery of cancer and invited patients to his institute for treatment. Modest, at first, in his claims he soon expanded until his advertising declared cures for goiter, varicose veins, and other maladies besides cancer.

Harry Hoxsey, erstwhile of Illinois, was discovered by Baker, who invited him to join the personnel of the institute. Money rolled into the coffers of the institute, according to the testimony of Hoxsey, and then trouble began. The Attorney General's office began court action to restrain the five officers of the Baker Institute from the practice of medicine without license. On third trial an injunction was secured restraining the four associates of Baker from the practice of medicine but Baker himself escaped injunction. About this time Hoxsey left the employ of Baker and started his own cancer clinic in Muscatine in opposition to Baker. He further entered several suits against Baker for slander ($250,000) and for money due him under contract ($85,000). These suits are pending. The injunction instigated by the Attorney General has been appealed to the Supreme

Court. The Federal Radio Commission having received voluminous complaints against his alleged misuse of his Radio Station KTNT suspended his license but have extended his probation from time to time pending final disposition of the matter. This brings his story up to about the first of December.

During the month of December we note that Baker has sought to secure approval of articles of incorporation for the Baker Institute from the Secretary of State. He has petitioned the radio commission for an extension of his temporary license to operate his radio station until January 31, 1931. This petition has been granted. Criminal action has been started by County Attorney Harold E. Wilson of Muscatine against Bruce Miller, formerly a member of the Baker Staff, for practicing medicine without a license. A civil suit was also filed in which the state seeks to enjoin him from practicing medicine in Iowa. Most spectacular of his recent activities is the invitation which Baker extended to President Hoover to assist in the ceremony opening his new print shop which is now printing a daily paper under Baker's control. Judging from the editorial comment reaching our attention the Iowa press feels that President Hoover's participation in this ceremony was untimely and ill-advised. The following editorial taken from *The News* (Newton, Iowa, issue of December 22), is typical in attitude of those which have come to our notice.

"President Hoover, whose touch on a telegraph key started the presses of Norman (Cancer Cure) Baker's newspaper at Muscatine, clearly needs a secretarial Moses to lead him out of the wilderness of tactlessness. Hoover has stumbled into more petty wrong-doing since president than any other of our recent executives. Here is Baker, with his radio station under fire, his cancer cure under fire, and hanging by a thread onto the respect of people generally; and the president does something that Baker may, if he chooses, take as an endorsement of his side of all these questions. Hammill alienated all the medical doctors and probably the osteopaths and chiropractors as well by speaking over Baker's station. Hoover's action, unless forgotten, will alienate the same groups, plus a lot of other folks who think Baker is pretty much of a false alarm. Hoover's intention was no doubt good, but the reaction in the middle west, especially Iowa, will not be so good. The president, out of all his secretaries, should be able to find one to tip him off as to what to do and what not to do. He has certainly been poorly advised in a whole lot of matters."

CORN SUGAR RELEASED FROM BAN

A recent ruling of the Secretary of Agriculture relative to the use of corn sugar industrially will be of more than passing interest in this section of the midwest.

When the Federal food and drugs act was passed twenty-three years ago corn sugar was a muddy, brown product less than fifty per cent sweet. Under conditions pertaining then, a prejudice existed against it. As a matter of administrative procedure the Department of Agriculture ruled that its presence in a prepared food must be declared on the label.

In the last ten years great progress has been made in refining corn sugar. It is now a clear, clean, white, granulated sugar. It is a wholesome and healthful food. It is now about seventy-five per cent as sweet as cane sugar. It has some properties more valuable than cane sugar. It has no qualities which are in any wise harmful to health. The reason for the old departmental ruling has disappeared.

Under date of December 26th, Secretary of Agriculture, Arthur M. Hyde, issued the following opinion. "Corn sugar (dextrose) when sold in packages, must be labeled as such; when sold in bulk must be declared as such; but the use of pure refined corn sugar as an ingredient in the packing, preparation or processing of any article of food in which sugar is a recognized element need not be declared upon the label of any such product.

"Nothing in this ruling shall be construed to permit the adulteration or imitation of any natural product such as honey by the addition of any sugar or other ingredient whatever."

There is also an affirmative economic reason for this change in departmental rulings. American agriculture is overproduced. The Federal Farm Board, farm organizations, many of the state colleges, and this department are striving to re-establish the economic balance of agriculture. The control and limitation of acreage planted is one method of re-establishing that balance. Finding new uses and new outlets for crops is another method.

There exists a potential market for corn through corn sugar variously estimated at from 5,000,000 to 100,000,000 bushels per annum. The smaller figure represents about 35 per cent. It is not likely that the larger figure will be realized for many years. Be the per cent large or small, the opening of this potential market for additional corn is a step in the right direction.

Summary of the Transactions of the House of Delegates at Its Special Session

At the annual meeting of the Iowa State Medical Society in May of 1929, the Committee on Public Policy and Legislation pointed out the lack of comprehensive and reliable data concerning the adequacy of material for teaching in the medical school and hospitals of the State University. Since the Committee had reason to believe that the Perkins, Haskell-Klaus Laws needed amendment and revision to satisfactorily serve the many interests for which they had been intended, the House of Delegates authorized a fact finding committee on Medical Education and Hospitals* and such a committee began its work. At the time of the annual meeting in Marshalltown in 1930, the committee had not finished its work, and, since it was very important that the House of Delegates discuss the finding of the committee before the beginning of the Forty-fourth General Assembly, a called meeting of the House was authorized by President Rohlf on Wednesday, Dec. 17th, in Des Moines. At this meeting the committee presented its full report,** which was duly discussed and accepted in its entirety by the House of Delegates.

In preparing this report the committee states as its purpose to present the findings of a careful study of various economic, social, educational and medical problems connected with the care of the indigent sick in Iowa. The findings are made in full appreciation of the separate and distinct reactions and relations of the public, the taxpayers, the legislators, the courts, the College of Medicine and Hospital authorities, the medical profession and the indigent of Iowa, in this problem. Reflecting the thoroughness of the committee in the pursuit of its commission, the summary and conclusions are herewith presented in their entirety.

The accompanying report epitomizes the activities of the House of Delegates in an extra called session on December seventeenth, in Des Moines. The summary of the findings of the Committee on Medical Education and Hospitals is reproduced in its entirety.

The Editor.

Summary and Conclusion

The resolution under which the Committee on Medical Education and Hospitals has worked, definitely instructed the committee to collect information but does not require it to make recommendations based upon such information. The committee, therefore, will not presume to advise the House of Delegates of the Iowa State Medical Society to adopt measures which might tend toward the solution of the problems which have become evident in the course of this investigation. The members of the committee believe that if it has collected enough accurate and reliable information, and presented it clearly and fairly, correct conclusions will naturally follow, remedies for evils and abuses will be obvious; therefore, recommendations and suggestions will be unnecessary. Accordingly then, this report is submitted for consideration, but without recommendation. The members of the committee feel, however, that it is proper to append the following summary of what seem to be important facts and questions which must be fairly met if the best interests of the indigent sick, the medical profession, and the cause of medical education in the state of Iowa are to be fully served.

1. There is no coordination between the agencies responsible for the determination of indigency in the county (the Board of Supervisors) and the State (the district court). A state patient returned from the hospital for further treatment at home is not automatically a charge upon the county supervisors, although his indigency has already been legally determined.

2. The fact that the cost per patient day for indigent patients in private hospitals averages $2.70 while the cost in the University Hospitals is $3.68 indicates that the private hospitals are rendering such services at less than cost.

3. The cost of medical care of the indigent sick under the operation of the Perkins, Haskell-Klaus Law in the State of Iowa is not greater than in other states of relatively equal and like population.

4. The University Hospitals are adequate in size and design to care for all the properly committed indigent patients of the state, and to meet the teaching needs of the medical school of, at present, 500 students.

5. The plan now in force of operating the hospitals at two-thirds capacity is uneconomical and

* The Committee: B. L. Eiker, M.D., Leon, Chairman; Arthur W. Erskine, M.D., Cedar Rapids; A. V. Hennessy, M.D., Council Bluffs.

** The detailed report is now available in printed form and because of its official character becomes a supplement to the 1930 volume of the Journal and should be procured from the Editorial Office of the Journal for inclusion in this bound volume.

extravagant. But the Hospital must live within its appropriation and the appropriation was limited by the 43rd General Assembly to $1,000,000.00 per year.

6. The limitation of beds under this plan of operation is one of several factors which have increased the number of patients on the waiting list to about 2,000.

7. The limitation of indigent beds to two-thirds capacity reduces the teaching material to an amount insufficient to supply the needs of a school of the present size.

8. The distribution of the material supplied by the law is fair, although it shows a preponderance in a few services and a slight deficiency in others. It is evident that a number of cases are committed under the law that are too inconsequential for their value in medical education for the cost of rendering them care at the University of Iowa, when they could be rendered as efficiently and more cheaply at home.

9. The anatomical material supplied by law is barely adequate to meet the needs of the undergraduates at the University and does not make satisfactory provision for those wishing to do advanced or research work, as originally planned when the medical college was built.

10. Fees from private patients in the Psychopathic Hospital are not being used for the support of the hospital.

11. No state appropriation has been made for the last three years for the serological laboratory. It is operated by charging fees and a charge is made against the University for serological service rendered.

12. The resolution adopted by the Board of Education, limiting private patients to approximately 5 per cent of the total bed capacity of the hospitals, is being substantially adhered to. The University authorities have agreed to the proposition that private patients should pay fees commensurate with those charged in private practice in the state. The Board of Education has accepted the general principle that such patients shall be held available for teaching purposes.

13. Many evils in connection with the operation of the Perkins, Haskell-Klaus Law are chargeable to the examining physician or those who certify cost patients; but one county has found an apparent remedy.

14. In the survey made of the physicians regarding the Perkins, Haskell-Klaus Law, 75 per cent expressed satisfaction in regard to its operation and benefits.

15. Evidence has been found of abuse of Section 4014 of the law pertaining to emergency cases, which have preference over other cases in order of admission to the hospitals. Cases are represented to be such when they really are not.

16. A survey of transportation costs for the year ending June 30, 1930, shows that only 52 per cent of the patients committed had their transportation paid out of State funds.

17. Although the methods employed by the purchasing department of the state university are pertinent to the study, since all hospital and medical college supplies are purchased through that department, yet lack of time and facilities for thorough investigation make it impossible for the committee to say more than that at the present time purchases for the hospital are apparently being made economically.

18. Under the Perkins, Haskell-Klaus Law, it is obligatory upon the University Hospitals to accept all properly committed patients, but this obligation was specifically limited by the last General Assembly to the number that could be cared for under the appropriation.

Following the presentation of this report President Rohlf invited general discussion. During the course of this discussion Dr. E. B. Howell, of Ottumwa, described in some detail the plan of the Wapello County Society in handling the indigent sick. Dr. Eiker closed the discussion by answering questions which had been asked by delegates.

President Rohlf then requested a report from the Legislative Committee. Dr. Burcham, chairman of this Committee, made a brief report and requested that the House continue the Committee on Medical Education and Hospitals, instructing them to make recommendations for the guidance of his Committee. He indicated that the Committee would attempt to secure a rewriting of the Medical Practice Act during the next session of the Legislature but considered it inadvisable to attempt to pass a new law at this time. "The clarifying of this act will be our main bill before the Legislature this year." He next called attention to the activity of the Iowa Hospital Association, indicating that they would present a bill for the licensing of hospitals in the state. A second bill sponsored by this Association would authorize a lien on insurance settlements paid to injured men. Before closing his report he called attention to legislation which would be presented by Dean Houghton for the securing of bodies for dissection in the medical school.

Next Dr. Harkness presented a report of the Board of Trustees. This report indicated that the operating expense of the Society has been slightly in excess of its income. He further indicated that the Speakers Bureau, which has recently been established, was an experimental project and one requiring considerable revenue for its

support. He further stated that if the Speakers Bureau was found to be of sufficient value to the Society an increase in dues might eventually be required for its maintenance. Dr. Glomset, Chairman of the Speakers Bureau, reported briefly on the activities of the Bureau to date. This report was largely that of outlining their objectives, which he stated were, "to promote solidarity in the profession, to aid the profession in keeping abreast of the times and to promote the extension of knowledge concerning health matters to lay audiences." He indicated that this would be accomplished by, (1) University extension courses, (2) furnishing speakers and programs to medical societies or district societies, and (3) furnishing lay audiences with speakers on medical subjects.

Dr. John I. Marker, Chairman of the Committee on Medical Economics, requested instruction from the House of Delegates relative to the scope of the investigation which they intended his committee to conduct relative to the program of socialized medicine. He further requested instruction from the House relative to the scope of their investigation and the nature of the report desired regarding a fee bill. The point which he raised in this regard was whether the House of Delegates would prefer that his Committee prepare a minimum or optimum fee schedule. Instruction was not furnished Dr. Marker from the floor but upon the suggestion by Dr. Jepson the delegates were instructed to write their recommendations to the chairman of the Committee.

The meeting was adjourned at 4:30 o'clock.*

Robert L. Parker, M.D., Secretary.

* Copies of the detailed report of the entire Special Session of the House of Delegates are available as a supplement to the Journal and may be secured without cost by members of the society in good standing by addressing the secretary's office of the Iowa State Medical Society, 1122 Bankers Trust Bldg., Des Moines, Iowa.

TOO MUCH SCARLET FEVER

(Continued from page 31))

charge has ceased. Many cases of scarlet fever make an apparently full recovery in seven to ten days after the onset without specific treatment. The administration of scarlet fever antitoxin often produces prompt results in the nature of arrest of the acute process. Under such circumstances approval of this department for shortening the period of quarantine has been asked many times. Such approval has always been denied for the reason that most children infected with the streptococcus of scarlet fever remain carriers of the germ for four weeks and even longer.

A Dick test for susceptibility should always be done before considering the administration of scarlet fever toxin to produce immunity. The method used should be the 5-dose treatment, the doses being given one week apart as recommended by the Dicks. This method may be expected to produce lasting immunity in 95 per cent of the children so treated, in about five weeks after the last dose. The State Department of Health discourages the administration of scarlet fever antitoxin in prophylactic doses to known contacts for the reason that the passive immunity thus conferred is lost at the end of two weeks after which the child is as susceptible as before. Moreover, children contacts with a case must remain in isolation with the patient for a period equal to the length of quarantine and hence suffer the hazard of exposure to infection during the latter portion of the quarantine. Further, if it later becomes necessary to administer antitoxin to such a child there is danger of serum sickness if not of actual anaphylaxis.

It is much better to inspect contacts daily for the early detection of symptoms. If found, the doctor should determine in his own mind if the case will be severe and if so he should administer scarlet fever antitoxin at once in a dose large enough to effect a cure, the total amount being given at one time if at all possible. Many mild cases will recover without the use of antitoxin.

The most prevalent diseases reported to the department during the month of November were chickenpox, scarlet fever, diphtheria, smallpox and mumps, and poliomyelitis in the order named. There was a very marked increase in chickenpox and scarlet fever, the first accounting for 341 cases compared with 103 for last month; and the latter an increase of 256 cases as against 170 cases. There is too much diphtheria in Iowa. Fifty-five cases were reported compared with 44 for October and 42 for November, 1929. Twelve of the cases or 23 per cent were reported from one city and 11 or 20 per cent were reported from another. The other 21 cases were reported from 17 counties. Smallpox was relatively low, 45 cases being reported compared with 211 for November, 1929. Twenty-eight cases of poliomyelitis were reported, all of them during the first three weeks of the month. Total cases reported since July 1, 211 from 48 counties.

Four trips were made by the Epidemiologist: one for typhoid fever, one for poliomyelitis, and two for talks on the Control of Communicable Diseases.

CHIROPRACTORS AND OSTEOPATHS RECOGNIZED

An opinion written by Assistant Attorney General G. O. Blake, early in December, held that a chiropractor or an osteopath may certify children to be non-infectious from a communicable disease and that the certificate should be given the same weight by a Board of Education as one made by a physician.

Speakers Bureau Activities

Extension Courses

Enthusiastic comments are being heard all over the state regarding the post graduate work sponsored by the Speakers Bureau of the Iowa State Medical Society and given by faculty members of the College of Medicine of the State University of Iowa. After a certain lecture, one physician was heard to remark: "That one lecture was well worth the tuition fees for both courses."

In the five centers where the courses are being given, there is a total registration of 193 physicians. The Bremer County Medical Society enrolled one hundred per cent to take the courses given at Waverly. Others have come from outside the county, making a total enrollment there of forty-three. At Fort Dodge there are thirty-five physicians taking the work, at Carroll twenty-three, at Des Moines fifty-five and at Oskaloosa thirty-seven.

Soon after the beginning of these courses, inquiries were received from other localities, asking that the same opportunity be offered to the physicians there. However, the Speakers Bureau Committee feels that it is inadvisable to organize other post graduate courses of this type at this time. It is their intention to offer similar work early next fall, through the continued cooperation of the University. By starting the courses in the early fall the work will be completed before winter weather prevents the doctors making the trip by automobile. In this way it is hoped that next year more physicians may be accommodated than at the present time. Preliminary arrangements incidental to scheduling such courses will be begun in the spring.

Physicians in any communities who desire to avail themselves of this opportunity for study, are urged to make an early request to the Bureau since requests will be taken care of in the order that they are received.

December Placements

Lions Club Meeting, Boone. December 2.
ALBERT A. SCHULTZ, M.D., Fort Dodge.
Cedar Rapids Dental Society, Cedar Rapids. December 8.
BENJAMIN F. WOLVERTON, M.D., Cedar Rapids—Canti Cancer Film.
Buena Vista County Medical Society, Storm Lake. December 10.
WILLIAM A. ROHLF, M.D., Waverly—Mistakes in Diagnosis.
Franklin County Medical Society, New Hampton. December 11.
WALTER L. BIERRING, M.D., Des Moines—The Coronary Problem in Heart Disease.
ADDISON C. PAGE, M.D., Des Moines — Cardiac Arrhythmia.
Linn County Medical Society, Cedar Rapids. December 11.
BENJAMIN F. WOLVERTON, M.D., Cedar Rapids—Canti Cancer Film.
Woodbury County Medical Society, Sioux City. December 18.
JOSEPH BROWN, M.D., Des Moines—The Story of Menstruation.
VERNON D. BLANK, Des Moines—Medical Economics.
Carroll County Medical Society, Carroll. December 19.
VERNON D. BLANK, Des Moines—Medical Economics.
Four-H Club, Ames. December 29.
DANIEL J. GLOMSET, M.D., Des Moines.

HELP US ADD TO THIS LIST!

Programs Available

One of the New Year's resolutions of the Speakers Bureau is to make available "bigger and better programs" for county and district medical societies, lay health organizations, etc. Several new projects are being planned, the details of which will be presented in the JOURNAL from time to time. At the present time unified programs given by well qualified speakers may be secured for county or other medical society meetings. The following programs are available:

CONTRACT PRACTICE

John I. Marker, M.D., Davenport
Lawrence Block, M.D., Davenport

MEDICAL ECONOMICS

Advertising by Physicians—William Koeneman, Knoxville.

Marion County Contract—C. S. Cornell, M.D., Knoxville.

What the Cults Have Taught the Members of the Regular Profession — F. M. Roberts, M.D., Knoxville.

MEDICAL INSURANCE

The Agent's Viewpoint — Walter St. John, Des Moines.

The Medical Examiner's Viewpoint—Martin I. Olson, M. D., Des Moines.

Practitioner's Point of View — Francis R. Holbrook, M.D., Des Moines.

THYROID (or) KIDNEY

Thomas F. Thornton, M.D., Waterloo
J. L. Kestel, M.D., Waterloo

PEPTIC ULCER, GENERAL CONSIDERATIONS

Paul A. White, M.D., Davenport
Elmer G. Senty, M.D., Davenport
Arthur A. Garside, M.D., Davenport

Requests for these programs should be made to the Bureau, 1122 Bankers Trust Bldg., Des Moines. D. M. NELSON, *Secretary.*

On the Writing of Medical Papers

Many physicians who have acquired valuable data relative to disease processes in the course of their medical practice, do not feel competent to present these findings to their fellow practitioners either by formal paper or informal discussion, since they feel handicapped by an inability to express their thoughts in correct, rhetorical form. In many instances this feeling is not justified because it has been demonstrated that when under stress a physician may find himself the equal of those less reticent. Much can be done for such a physician by authoritative reassurance or help from one more used to medical writing.

It would be difficult indeed for one to present hard and fast rules of correctness in medical writing, since medical writing, like all other forms of composition must be governed by the individuality of its author, the nature of the subject discussed and the audience to be reached. O'Henry could never have written successfully had he attempted to follow the style and form of Dickens. One's essays must reflect one's personality. On the other hand it is impossible to write or discuss scientific subjects without observing all accuracy in scientific data and at the same time using an expressive, concise and forceful rhetorical form. It is never good form to replace scientific fact by unsupported opinion or conjecture. Beware, as well, of conclusions drawn from insufficient or unreliable evidence.

Again we find that formality or informality may be required depending in a large measure upon the nature of the subject discussed and the audience for whom the paper is prepared. In presenting papers for use in highly technical or purely scientific publications, one should be governed by the general form employed in the particular publication, omitting from such a paper all extraneous or irrelevant discussion.

In journals organized without a technical standard or those presenting medical subjects for lay readers, greater informality and timely embellishments may render the discussion more readable and understandable. Even in publications of this general character care in grammatical construction must be practiced and scientific facts presented with exactness. Another group of medical publications, such as the Journal of the Iowa State Medical Society, attempts to strike a half-way ground, combining papers of purely technical interest, those of semi-technical interest and those more definitely non-technical, since a journal of this character should be a house organ and as such present in the most readable form such news, scientific and otherwise, as may pertain particularly to the needs and interests of the members. In this type of publication one must be governed in style by the subject matter presented.

It is always a safe rule that one must adhere meticulously to correct usage in words and grammatical construction unless emphasis or quotation demand some deviations which must be acknowledged immediately. Frequently, the attempt to employ a fastidious style may completely stultify the material presented and overshadow the personality of the author.

At this time there are several useful guides to medical writing, published by recognized authorities, from which the physician may receive useful suggestions. Outstanding in this group are "The Writing of Medical Papers," by Mellish of the Mayo Clinic, "The Style Book," of the Chicago Society of Proof-Readers, and the "Art and Practice of Medical Writing," by Fishbein and Simmons of the American Medical Association.

Through the personnel of the editor's office of this Journal, suggestions and assistance may be obtained in preparing medical papers. We are glad to cooperate with any member of our Society in the preparation of scientific papers, whether for use in the Journal of the Iowa State Medical Society or not, and will undertake such service as editing, proof-reading, compilation of bibliographies, tracing of references, preparation of cuts and typing of manuscripts. This service will be rendered to our readers at nominal expense and by persons whom we can recommend for accuracy and training in this particular work.

Finally, I would offer two suggestions for the guidance of every medical author. *One*, know what you have to say. *Two*, say it and stop.

Another Service to Members

By special arrangements we are able to offer our readers assistance in the preparation of scientific papers at a nominal cost. This service will cover suggestions in form and composition of papers, proof reading, compilation of bibliographies, illustrating and typing.

—The Editor.

SECRETARY'S MESSAGE

YOUR DUES ARE DUE

Your membership in the State Society ends January, 1931, unless your dues are paid.

Your county secretary will report his paid membership to the State Society which serves as a basis for affiliating you with organized medicine — State and National.

Pay your dues now. All payments should be made to your county secretary.

Bob L Parker

SOCIETY PROCEEDINGS

Audubon County Annual Meeting

Two Des Moines physicians furnished the scientific program for the Audubon County Medical Society at its annual meeting held in Exira, Thursday, December 4. W. Eugene Wolcott, M.D., spoke on Fractures, and Walter D. Abbott, M.D., dealt with the subject, Injuries of the Head. The annual election of officers resulted in Dr. P. E. James of Elk Horn being named president; Dr. L. E. Jensen of Audubon, vice president, and Dr. R. A. Jacobsen of Exira, secretary-treasurer. Dr. R. F. Childs of Audubon was chosen as delegate and Dr. Jensen as alternate.

Boone County Social Meeting

Thursday, December 11, the members of the Boone County Medical Society entertained the nurses of the Eleanor Moore Hospital, the board of trustees and the supervisors at a banquet given at the American Legion Log Cabin. An informal dinner program was presided over by President B. T. Whitaker.

Bremer County Annual Meeting

Walter C. Alvarez, M.D., of Rochester, was the speaker of the evening at the Bremer County meeting held in Waverly, Thursday, November 27. He spoke on The Art of Medicine. Following are the officers who will serve during 1931: Dr. L. D. Jay of Waverly, president; Dr. E. N. Osnes of Readlyn, vice president, and Dr. F. R. Sparks of Waverly, secretary-treasurer.

Carroll County Annual Meeting

The Carroll County Medical Society met for dinner at the Hotel Burke in Carroll, Friday, December 19. Every member of the society was present and two new members were taken in during the evening.

The session was devoted exclusively to medical economics and election of officers, the following officers being elected for 1931: Dr. David H. Hopkins of Glidden, president, and Dr. Walter A. Anneberg of Carroll, re-elected secretary-treasurer.

The medical economics portion of the program was opened by a discussion of the county contract plan of caring for the indigent sick by Mr. Vernon D. Blank, managing director of the state society, which was followed by a lively and extended discussion of such problems as fee bill, examination of patients for commitment to the University hospitals, care of county indigents, and allied problems.

Definite action was taken in regard to three of the problems of medical economics which confronted the society and the following special committees were created by unanimous vote of the society: Committee on Local Care of the Indigent Sick, which has as its duty to investigate the medical cost of caring for county charges during the past five years; Committee on Joint Examinations for State Indigent Patients, which committee has as its duty to study the possibility of employing the "Wapello County Plan" of having all Perkins, Haskell-Klaus Law examinations made by a committee of the county medical society; and Committee on the County Fee Bill, which has as its function to revise the present fee bill of the society, modifying it to meet the suggested fee bill promulgated by the Medical Economics Committee of the state society.

Retiring President Chain, in turning over the gavel to the newly elected president, stated as his opinion that such meetings devoted primarily to medical economics realized the highest objective of county medical societies, since a county organization was the proper and only place in which to work out the vital problems which had been acted upon during the evening.

Cerro Gordo County Annual Meeting

The Cerro Gordo County Medical Society held its annual meeting Tuesday evening, December 16, at the Eadmar Hotel. Twenty-eight active members were present. After a 6:30 dinner, the following officers were elected for the coming year: Dr. C. E. Wright of Clear Lake, president; Dr. C. W. Hubbard of Mason City, vice president, and Dr. T. E. Davidson of Mason City, re-elected secretary and treasurer. Dr. S. A. O'Brien, the outgoing president, was elected to the board of censors; Dr. E. L. Wurtzer of Clear Lake, was named delegate, and Dr. George M. Crabb of Mason City, alternate. After the business session a motion picture film on Traumatic Surgery of the Extremities was shown by the courtesy of Davis & Geck Company. William Jepson, M.D., of Sioux City, gave a very interesting and instructive talk on Surgery of the Aged. We were very glad to have Dr. Jepson with us and to have these words from a man of his standing in the medical profession.

T. E. Davidson, M.D., Secretary.

Delaware County Annual Meeting

The following officers for 1931 were elected at the annual meeting of the Delaware County Medical Society held in Manchester, Wednesday, December 10. Dr. J. I. Jones of Manchester, president; Dr. C. B. Rogers of Earlville, vice president, and Dr. D. M. Fuiks of Manchester, secretary and treasurer. Dr. Jones and Dr. Fuiks are delegate and alternate, respectively.

Des Moines County Annual Meeting

Dr. H. B. Young of Burlington was elected president of the Des Moines County Medical Society at the annual meeting of that organization held in Bur-

lington, Tuesday, December 9. Dr. Young was president of the society just exactly thirty years ago. Dr. George B. Dixon was chosen as vice president, and Dr. C. J. Lohmann was elected secretary and treasurer.

Dubuque County Annual Meeting

Dr. J. Carl Painter is to head the Dubuque County Medical Society during the year 1931. His election took place at the annual meeting held in Dubuque, December 23. Other officers are: Dr. H. G. Langworthy, first vice president; Dr. E. F. Mueller of Dyersville, second vice president, and Dr. H. B. Hibbe, re-elected secretary and treasurer.

Hamilton County Annual Meeting

Officers for the coming year elected at the annual meeting of the Hamilton County Medical Society held in Webster City, Friday, December 5, include: Dr. E. W. James of Kamrar, president; Dr. W. B. Lewis of Webster City, vice president; Dr. M. B. Galloway of Webster City, re-elected secretary and treasurer; Dr. E. W. Slater of Jewell, delegate, and Dr. F. F. Hall of Webster City, alternate.

Henry County

The regular monthly meeting of the Henry County Medical Society was held in Mt. Pleasant, Friday, November 21. After a 6:30 dinner, the following scientific papers were presented: Surgery in the Diabetic, Walter A. Sternberg, M.D., and Infection of the Middle Ear, Samuel W. Huston, M.D.

Iowa County Annual Meeting

Dr. F. W. Bush of Van Horne, was elected president of the Iowa County Medical Society at a meeting held in Marengo, Tuesday, November 25. Other officers are: Dr. Henry G. Moershel of Homestead, vice president; Dr. Irwin J. Sinn of Williamsburg, secretary and treasurer.

Jackson County Annual Meeting

The Jackson County Medical Society and its auxiliary met in Maquoketa, Thursday, December 11, for a 6:30 chicken dinner. After the banquet the auxiliary adjourned to the home of Dr. F. J. Swift, and members of the medical society assembled for the annual election. The results were: Dr. E. L. Lampe of Bellevue, re-elected president; Dr. John W. Jordan of Maquoketa, vice president; Dr. G. C. Ryan, secretary and treasurer; Dr. F. L. Griffin of Baldwin, delegate, and Dr. William Lowder of Maquoketa, alternate.

Jefferson County Annual Meeting

Officers elected for 1931 at the annual meeting of the Jefferson County Medical Society held in Fairfield recently include: Dr. J. S. Gaumer of Fairfield, president; Dr. S. K. Davis of Libertyville, vice president; Dr. H. E. Graber of Fairfield, secretary and treasurer, and Dr. Roy A. McGuire of Fairfield, delegate.

Johnson County Annual Meeting

Dr. Harry R. Jenkinson of Iowa City, was chosen as president of the Johnson County Medical Society for 1931, at the annual meeting of that organization held in Iowa City, Wednesday, December 3. Dr. J. E. Kimball of West Liberty, was elected vice president, and Dr. George C. Albright of Iowa City was re-elected secretary-treasurer of the society. The scientific program consisted of the following two papers: The Progress of Surgery, H. L. Beye, M.D., and The City Health Officer, Francis L. Love, M.D.

Jones County Annual Meeting

At a meeting of the Jones County Medical Society held Monday, December 8, at the Mercy Hospital in Anamosa, the following officers for 1931 were elected: Dr. Cecil R. Smith of Onslow, president, and Dr. H. F. Dolan of Anamosa, secretary.

Lee County

Tuesday afternoon, December 16, members of the Lee County Medical Society met in Fort Madison for a scientific session and the following program was presented: Gangrene, Howard L. Beye, M.D., of Iowa City; Modern Cataract Surgery, Walter Stevenson, M.D., of Quincy, Illinois; and Treatment of Diabetes, George B. Crow, M.D., of Burlington.

Linn County

Leda J. Stacy, M.D., of the Mayo Clinic in Rochester, was the speaker of the evening at the regular meeting of the Linn County Medical Society held in Cedar Rapids, Thursday, December 11, taking as her subject Carcinoma of the Ovary. Preceding Dr. Stacy's paper, the Canti Cancer film was shown and explained by Dr. B. F. Wolverton.

Marion County Annual Meeting

The Marion County Medical Society held its fifty-eighth annual session at the Buckles Tea Room in Knoxville, Thursday, December 18. Following a 6:30 dinner the election of officers for the ensuing year was held. Dr. H. E. White of Knoxville, was named president; Dr. D. S. Burbank of Pleasantville, vice president; Dr. C. S. Cornell of Knoxville, re-elected secretary and treasurer; Dr. E. C. McClure of Bussey, delegate, and Dr. H. L. Bridgeman of Knoxville, alternate. Dr. H. C. Payne of Pella, as retiring president, rendered the traditional president's address. Dr. E. R. Coffey of Des Moines, who is with the United States Public Health Service and is at present acting as director of co-operative county health work, was guest speaker of the evening. His address dealt with the establishment of health units in Iowa counties.

C. S. Cornell, M.D., Secretary.

Marshall County Annual Meeting

Dr. E. M. Mills of LeGrand, was chosen president of the Marshall County Medical Society, Tuesday, December 2, at a dinner meeting held in Marshall-

town. Other officers named were Dr. W. A. Kauffman of Marshalltown, vice president; Dr. W. W. Southwick of Marshalltown, secretary and treasurer; Dr. E. H. Noble of Clemons, delegate; and Dr. Byron M. Biersborn of State Center, alternate.

Osceola County Annual Meeting

The annual meeting of the Osceola County Medical Society was held in Sibley, Tuesday, December 30. Officers elected for the ensuing year are: Dr. L. H. Heetland of Sibley, president; Dr. K. A. Sporre of Harris, vice president; Dr. Earl P. Farnum of Sibley, secretary and treasurer; Dr. Frank Reinsch of Ashton, delegate, and Dr. Frank P. Winkler of Sibley, alternate.

Page County Annual Meeting

Thursday, December 4, members of the Page County Medical Society met for their regular annual business session in Clarinda. The results of the election were: Dr. F. K. Burnett of Clarinda, president, and Dr. C. C. Perriott of Clarinda, vice president. Dr. J. F. Aldrich of Shenandoah was re-elected secretary.

Plymouth County Annual Meeting

The Plymouth County Medical Society met jointly with the Sacred Heart Hospital staff for a dinner meeting Tuesday, December 2, in Le Mars. The following officers were elected to serve the Plymouth County Medical Society during 1931: Dr. W. J. Brunner of Akron, president; Dr. F. G. Vernon of Merrill, vice president; Dr. L. C. O'Toole of LeMars, secretary, and Dr. A. H. Jastram of Remsen, delegate.

Polk County

The regular monthly meeting of the Des Moines Academy of Medicine and Polk County Medical Society was held at the Hotel Fort Des Moines, Tuesday evening, November 25. The program consisted of a scientific paper by Joseph Brown, M.D., on the subject, The Story of Menstruation, A Review of the Whys and Wherefores. The talk was interesting and was well received.

Polk County Annual Meeting

The annual meeting of the Des Moines Academy of Medicine and Polk County Medical Society was held at the Des Moines Club, Tuesday evening, December 16. A buffet dinner was served at 6:30 to almost two hundred members and guests. Fred Moore, M.D., furnished the scientific portion of the meeting, in a talk on Immunization of School Children Against Diphtheria. The following officers and delegates were elected for 1931: Dr. S. E. Lincoln, president-elect; Dr. L. K. Meredith, re-elected secretary-treasurer; Drs. Thos. A. Burcham, Walter E. Baker, Russell C. Doolittle, and Fred Moore, delegates, and Drs. John Russell, A. D. McKinley, Clifford W. Losh, and William E. Sanders, alternate delegates. Dr. Francis R. Holbrook is the new president who will serve during the year 1931.

Poweshiek County Annual Meeting

The Poweshiek County Medical Society met Wednesday, December 3, at the Community Hospital in Grinnell. A paper was read by J. Lea Taylor, M.D., of Montezuma, on Hemolytic Icterus, with presentation of case. The following officers were named to serve during the coming year: Dr. E. C. Bliss of Grinnell, president; Dr. Delano Wilcox of Malcom, vice president; Dr. E. E. Harris of Grinnell, secretary; and Dr. John T. Padgham of Grinnell, treasurer.

Sioux County Annual Meeting

Friday, December 19, the members of the Sioux County Medical Society met at Hawarden for the regular annual meeting. The scientific program consisted of two papers: Common Complications of Head Injuries, Anatole Kolodny, M.D., of Sioux City; and Aplastic Anemia, Raymond Gregory, M.D., of Hawarden. Newly elected officers for 1931 are: Dr. A. J. Meyer of Hawarden, president; Dr. Gerrit Maris of Hull, vice president; and Dr. F. C. Bendixen of Ireton, secretary and treasurer.

Tama County Annual Meeting

Dr. W. C. Wagner of Traer, was named president of the Tama County Medical Society at the annual meeting of that organization held in Toledo, Monday, December 15. Dr. A. F. Walter of Gladbrook, was elected vice president, and Dr. A. J. Farnham of Traer, was made secretary and treasurer.

Washington County Annual Meeting

The Washington County Medical Society met in regular session, Tuesday, December 2. E. G. Senty, M.D., of Davenport, was the speaker of the evening, taking as his subject, Peptic Ulcer. The election of officers for the coming year resulted in Dr. E. E. Stutsman being named as president; Dr. A. L. Braden of Wellman, vice president; Dr. W. S. Kyle, secretary and treasurer; Dr. W. L. Alcorn, delegate, and Dr. H. F. Masson, alternate.

W. S. Kyle, M.D., Secretary.

Webster County Annual Meeting

On November 25th, the Webster County Medical Society held a business meeting at St. Joseph's Mercy Hospital. The post graduate courses to be given under the auspices of the Speakers Bureau of the Iowa State Medical Society were first discussed and it was voted by the society to dispense with regular meetings until after the courses are over for this winter. The election of officers for the coming year resulted in the following manner: Dr. Robert Evans, president; Dr. L. L. Leighton, vice president; Dr. John C. Shrader, secretary and treasurer; Dr. R. W. Stahr, delegate, and Dr. J. H. Bruce, alternate.

John C. Shrader, M.D., Secretary.

Woodbury County Annual Meeting

On Tuesday, December 18, the members of the Woodbury County Medical Society met for their regular annual meeting. Joseph Brown, M.D., of Des Moines, furnished the scientific paper for the session, speaking on The Story of Menstruation. Dr. Brown was sent to us by the newly organized Speakers Bureau of the State Society and gave a very interesting, complete talk which was appreciated by all present. Mr. Vernon Blank gave a very enlightening talk on the care of the county poor by contract and Dr. Charles Hennessy of Council Bluffs, outlined the plan used in his city. By official action of the society it was decided to devote the entire next meeting of the society to a discussion of this problem. The election for 1931 resulted in the following physicians being made officers: Dr. J. B. Naftzger, president; Dr. George Koch, vice president; Dr. R. H. McBride, secretary and treasurer; Dr. Roscoe Jepson, delegate, and Dr. R. F. Bellaire, alternate.

Roscoe Jepson, M.D., Secretary.

Four County District Medical Association

Members of the Four County District Medical Association met Thursday, November 25, for a dinner meeting at the Hotel Lewis in Cherokee. The organization is composed of physicians in Buena Vista, Cherokee, Ida and Plymouth counties, and about thirty attended the meeting.

The program consisted of a paper on Medical Economics by Channing G. Smith, M.D., of Granger, who is president-elect of the Iowa State Medical Society, and a talk by E. R. Coffey, M.D., of Des Moines, on the County Health Unit Plan. Officers for 1931 are: Dr. E. S. Parker of Ida Grove, president; Dr. C. H. Johnson of Cherokee, vice president; Dr. M. J. Joynt of Le Mars, secretary and treasurer.

Upper Des Moines Medical Society

Tuesday, December 3, approximately fifty physicians of the Upper Des Moines Medical Society met in Emmetsburg for their regular winter meeting. The afternoon program was as follows: Hemorrhage in Obstetrics, J. H. Bruce, M.D., Fort Dodge; Management of Diabetes in Adults, M. T. Morton, M.D., Estherville; Syphilis of the Tibia, C. G. Nicholson, M.D., Spirit Lake; The Future of Medical Practice, Q. C. Fuller, M.D., Milford; two moving pictures films shown by the courtesy of Davis and Geck, Surgical Treatment of Peptic Ulcers and Traumatic Surgery of the Extremities.

Dr. George H. Keeney of Mallard, presided over the 6:30 banquet as toastmaster of the evening program. M. E. Barnes, M.D., of the State University of Iowa, was the principal speaker, delivering an illustrated lecture on Preventive Medicine at Home and Abroad. Mr. Vernon D. Blank, managing director of the Iowa State Medical Society, discussed briefly Some Legislative Problems of Interest to the Physician and the Public.

INTERESTING NEWS
In Brief

The recent arrest of one H. M. Ashley at Decatur, Illinois, called to attention the activity of two men posing as eye specialists who had operated extensively in Iowa and Illinois. Their method appeared to be that of operating as itinerant physicians, advertising special attention to eye conditions. One member of the team met and interviewed the victim and usually found it necessary to refer the case to his partner for very special treatment.

George W. Rowse of Aurora, a victim of Ashley, stated that he had given this charlatan $550 in cash for treatments which were guaranteed to relieve an alleged eye condition last year. Mr. Rowse did not receive benefit from the treatments, and was able to assist the authorities in securing Ashley's arrest. Ashley is now released on a $1,000 bond to appear for hearing during the next term of court.

Harry M. Hoxsey, formerly identified with Norman Baker in the Baker Institute at Muscatine, recently paid a fine of $100 and costs in the Fulton county Court in Lewiston, Illinois, having plead guilty to a charge of practicing medicine without a license at that point. It will be recalled that an injunction has been granted by the Muscatine county court enjoining Hoxsey from the practice of medicine without a license in Muscatine.

Decatur county in 1920, voted a tax to erect a county hospital. A recent attempt was made to utilize the fund of $50,000 which has accumulated to date to begin the erection of this hospital. The board of supervisors, however, has ruled that construction cannot be started until the full amount of $70,000 is raised.

A temporary organization of eye, ear, nose and throat specialists was completed in Cedar Rapids recently. The organization will be known as the Iowa Academy of Ophthalmology and Oto-Laryngology and Dr. Gordon C. Harkness of Davenport has been elected temporary chairman.

Arrested on a contempt charge, Howard I. M. Hutchins of Council Bluffs, has been released from jail on bond, pending his hearing for practicing "divine healing" or "touch healing" without a license from the medical board of the state.

St. Joseph's Hospital at Keokuk has recently launched a campaign to secure $200,000 to retire debts which have become burdensome to the institution and to release for charitable work interest monies now expended toward this debt.

It has been announced that Dr. Kendall Emerson of New York City, managing director of the National Tuberculosis Association, will visit Iowa early in January for a series of conferences with local agencies interested in the prevention of tuberculosis.

The twenty-seventh semiannual clinic of the Lutheran hospital and the Hampton Clinic was held December 11th at the hospital in Hampton, Iowa. One hundred and fifty doctors and guests attended the meeting.

A new county hospital at Webster City is nearing completion. It is expected that dedication will be possible early this month.

Nearly 200 physicians attended the Clinic on Psychiatry recently offered at the University of Iowa College of Medicine.

Following a fire, which caused considerable damage, the Audubon Hospital has announced that they will suspend operation.

On Saturday, December 13th, the Durant Hospital opened its doors for the reception of patients.

PERSONAL MENTION

Dr. **Evon Walker** of Ottumwa delivered a fifteen minute lecture over Radio Station WIAS on "Diseases of the Heart," Friday, December 5. This is the first of a series of health talks to be given over this station.

Drs. **Arthur W. Erskine** of Cedar Rapids, Thomas A. Burcham of Des Moines and Harold A. Spilman of Ottumwa, were among Iowa radiologists who attended the national convention of the Radiological Society of North America, held in Los Angeles, December 1.

Dr. **John F. Sargent** of Waverly, Kansas, has arrived in New Market, where he is occupying the offices of the late Dr. Kitchen.

Dr. **J. M. Molsberry** has accepted an appointment as assistant eye specialist at the State University of Iowa and is leaving Ruthven for Iowa City to begin his work there immediately.

Dr. **E. B. Bush** was elected president of the Ames Chamber of Commerce for 1931 at the recent election held by that organization.

Dr. **A. A. Schultz** of Fort Dodge addressed the members of the Boone Lions Club, Tuesday evening, December 2, on "The Cost of Sickness and the Price of Health."

Dr. **Lamont H. Youtz**, formerly located at 1010 Equitable Building, has moved his offices to the Polyclinic Hospital Building, where he has joined the staff of the Des Moines Clinic.

Dr. **Leslie G. Hill**, an eye, ear, nose and throat specialist, formerly located at Sioux Falls, South Dakota, has arrived in Estherville, where he will continue the practice of his specialty.

Dr. **John H. Peck**, president of the Iowa Tuberculosis Association, presented that organization's problems to members of the Ottumwa Kiwanis Club, Monday, December 8.

Dr. **James W. Mulick** is celebrating this year, the thirtieth anniversary of his practice in Elma. Arriving there in 1900, he has been in constant active practice.

Dr. **E. A. Rust** of Webb, has purchased the office equipment of the late Dr. Delahunt at Marathon, and will maintain an office and regular office hours there.

Dr. **George B. Crow** of Burlington, has been elected permanent chairman of the Des Moines County Health Unit advisory board which was appointed by the supervisors to have jurisdiction in the operation of the health unit there.

Dr. **John R. Black** addressed the Jefferson Rotary Club, Tuesday evening, December 2, on his recent European trip, stressing particularly conditions in Russia under the Soviet rule.

Dr. **George E. Snearly** is leaving Goodell and moving to Houston, Texas, where he, with the aid of an associate, will operate a sanitarium.

Dr. **M. J. Kenefick** of Algona, spoke on "Tuberculosis" at a meeting of the local Rotary Club, Monday, November 24.

Dr. **Leo J. Hombach**, formerly of Council Bluffs, has moved to Omaha, Nebraska, where he is associated with Drs. Wherry and Haney, eye, ear, nose and throat specialists.

Dr. **Frank M. Tombaugh** was elected president of the Burlington unit of the Northwestern University Alumni at the organization meeting of that association held recently in Burlington.

MARRIAGES

Miss Molly Glatstein and Dr. J. M. Krigsten, both of Sioux City, were married at the home of the bride's parents, Sunday, December 7. After a wedding trip to New York the couple will be at home in Sioux City.

The marriage of Miss Mildred Anderson of Mason City, and Dr. R. W. Peterson of Corwith, took place in Mason City on Thanksgiving Day. The couple will be at home in Corwith.

DEATH NOTICES

Hoag, Harry M., of Mason City, died Wednesday, December 24, at the age of sixty as the result of a two months' illness. He was graduated in 1894 from the Jefferson Medical College of Philadelphia. At the time of his death he was a member of the Cerro Gordo County Medical Society.

Ruth, Charles E., of Des Moines, died Thursday, December 11, at the age of sixty-nine. He was graduated in 1883 from the State University of Iowa College of Medicine. At the time of his death he was a member of the Polk County Medical Society.

Sturdivant, John M., of Cincinnati, died recently at the age of sixty-four as the result of a sudden heart attack. He was graduated in 1887 from the College of Physicians and Surgeons at Keokuk. At the time of his death he was a member of the Appanoose County Medical Society.

HISTORY OF MEDICINE IN IOWA

Edited by the Historical Committee

DR. WILLIAM JEPSON, Sioux City
DR. ARTHUR D. WOODS, State Center
DR. FRANK M. FULLER, Keokuk
DR. WALTER L. BIERRING, Des Moines
DR. NORMAN F. MILLER, Iowa City

The History of the Marion County Medical Society*
With Individual Biographies

F. M. ROBERTS, M.D., Knoxville

The territory comprising Marion County was in the possession of the Indians until the Sacs and the Foxes, by treaty concluded October 11, 1842, relinquished to the United States all their lands west of the Mississippi. By the terms of this treaty the white man was given the right to settle east of the line running north and south which divided the present territory of Marion county into two equal parts, after May 1, 1843, and west of that line after October 10, 1845.

Little was known of this section of the country prior to the actual settlement of the county in 1843. Just who was the first white man to effect a settlement within the limits of Marion county is a matter of uncertainty. From those pioneer days, when no legal requirements were exacted, when the title of M.D. was not always associated with those men who cared for the sick professionally, when no registration was required, we have no means extant by which to gather the early history of the medical profession in Marion county except from the living pioneers of those early days and from fragmentary data secured by diligent inquiry and research.

The Marion County Medical Society was organized January 8, 1872. Dr. A. D. Wetherell was chosen president and Dr. H. J. Scoles secretary. The additional charter members were Drs. N. R. Cornell, W. E. Wright, S. Q. Duncan, W. T. Baird, J. W. Mitchell and E. Williams, all of whom are dead. However, the family names of two of these physicians are still familiar to most homes, namely, Cornell and Wright. Dr. N. R. Cornell was the grandfather of our present secretary, and Dr. W. E. Wright was the father of Dr. J. Robert Wright. These sturdy pioneer physicians traveled on unmarked highways, crossed streams by ford or ferry boat, and by dogged determination made way through swampy stretches. On foot or horseback with their armamentarium packed in saddlebags they rendered medical service of dependable type and high quality. However, "Old Dobbin" has been superseded by the auto, the streams have been spanned by cement and steel, therapeutic measures have made wonderful progress, surgery has moved forward by leaps and bounds, the discovery of sterilization has changed all previous concepts, and the modern hospital provides means of caring for the sick never anticipated by scientific men of sixty years ago. In recognition of the sterling qualities of the pioneers of the Marion county medical profession, the commanding courage which they possessed and their triumphant achievements amid unfavorable surroundings, no eulogium could be pronounced that would adequately express our sincere admiration.

The membership of the Marion County Medical Society listed in the first Medical Directory published in 1876, is as follows:

Ardery, W. A., Knoxville, †R.
Bell, S. C., Attica, *R.
Cornell, N. R., Knoxville, †R.
Cornell, C. W., Knoxville; Rush Medical College, Chicago, 1871, R.
Duncan, S. Q., Pleasantville; Eclectic Medical Institute, Cincinnati, no date, E.
Favor, J. M., Hamilton, †R.
Fadow, M. J., Hamilton, *R.
Finarty, J. W., Dallas, †R.
French, J. T., Knoxville, †R; U. S. Examining Surgeon for Pensions.
Guthrie, A., Pella; Ohio Medical College, Cincinnati, 1866, R.
Hendershot, J. T., Otley, †R.
Hill, Benjamin, Marysville, †E; U. S. Examining Surgeon for Pensions.
Johnston, P. M., Red Rock, †R.

* Address before the Marion County Medical Society, December 13, 1928, and subsequent additions.

Keables, B. F., Pella; College of Physicians and Surgeons, Keokuk, Iowa, 1852, R.

Keables, E. H., Pella; Rush Medical College, Chicago, no date, R.

Kirkpatrick, R. S., Knoxville; Homeopathic Medical College, Philadelphia, 1875, H.

Kirkwood, T. J., Otley, †E.

Lind, D. G., Hamilton, *R.

Mitchell, J. W., Gosport; Detroit Medical College, Michigan, 1870, R.

Roberts, A., Marysville, †E.

Rudolph, F., Pella; Germany, no date, R.

Scoles, Hamilton J., Knoxville; College of Physicians and Surgeons, Keokuk, Iowa, 1853, R; president of the Marion County Medical Society.

Shinnick, C. C., Knoxville, †R.

Wetherell. A. D.. Knoxville, †R.

Wilkin, R. D., Pella; College Physicians and Surgeons, Keokuk, Iowa, 1871, R.

Williams, E., Pleasantville, †E.

Wright, William E., Knoxville; College of Physicians and Surgeons, Keokuk, Iowa, 1866, R; secretary of Marion County Medical Society.

(Note:—R denotes regular in practice; H, homeopathic in practice; E, eclectic in practice; PM, physio medical in practice; B, botanic in practice; * graduation doubtful; † not a graduate.)

Brief biographies are available of some of the pioneer physicians of Marion county and are here presented for their historical interest.

Dr. James L. Warren was born in Green county, Tennessee, April 1, 1801, and settled in Lee county, Iowa, in 1841. He made claim to a piece of land in Mahaska county soon thereafter but later abandoned that idea. He then entered claim to a tract of land about three miles southeast of Pella, Iowa. He began the practice of medicine in 1831, and continued till a short time before his death which occurred at his residence near Peoria, Mahaska county, January 18, 1870, aged sixty-nine years. The records extant indicate that he practiced medicine in Iowa from 1841, in Lee, Mahaska and Marion counties consecutively, that he was a land owner and a prominent minister. He was the first minister of the M. E. church who preached in Marion county, effected the first organization of the church in the county, was licensed as a local preacher in 1828, ordained deacon at Oskaloosa in 1852, and was ordained an elder by Bishop Ames in 1863. He is said to have been very successful in the practice of medicine, and to have been called to make many professional calls outside of the county. He was highly respected by all who knew him and especially by those who shared the privations of pioneer life.

Dr. James Rousseau figured conspicuously in the early history of Marion county. He was born in Wayne county, Kentucky, August 30, 1812, came to Iowa in 1843, and settled in Marion county in 1845. He was a surveyor as well as a physician and laid out the towns of Knoxville, Pella, Bussey, Marysville and Elm Grove. He was closely identified with the county until 1864, when he went overland to California.

Dr. W. B. Young was born in Mercer county, Pennsylvania, on the twelfth day of November, 1812, and when still a boy accompanied his parents to Ohio, where he remained until after attaining his majority. He divided his time between farming and teaching until making his choice of medicine as a profession. He practiced medicine for thirteen years in Ohio. Then, in 1852, emigrated to Iowa, settled in Marion county, where he followed his chosen profession. At one time he moved to Van Buren county, remained there three years and then returned to Knoxville.

Dr. J. T. French was born near Lebanon, Ohio, April 23, 1813, and died of uremic poisoning in Hutchinson, Kansas, September 28, 1903. He began the study of medicine at nineteen years of age, came to Marion county in 1845, entered government land and practiced medicine while on the farm. In 1851 he moved to Hamilton and in 1857 located at Knoxville, where he continued in the practice of medicine until 1903, when he died at the age of eighty years. He was a nongraduate in medicine and the proprietor of a drug store. He was the first pension examiner appointed in Marion county, and a typical physician of the pioneer days.

Dr. A. C. Cunningham was born in Rockbridge, Virginia, on December 6, 1813. Through the influence of his uncle, Dr. J. S. Cunningham, he was induced to choose the practice of medicine as a profession. With his uncle as preceptor, and after preparing himself, he attended lectures at the St. Louis Medical College. In 1840 he moved to Iowa and settled in Ottumwa, and thence to Oskaloosa where he remained two years and in 1846 removed to Marion county. At the age of seventy-six he died on July 20, 1880. His life is said to have illustrated the dignity of an honest physician and a patriotic citizen.

Dr. P. M. Johnston was born in Richland county, Ohio, February 3, 1817, and was reared on a farm. He began the study of medicine in early life and commenced to practice at Fort Williams, Clinton county, following it to success for ten years. He came to Iowa in 1855, locating in Richland, Keokuk county, and from there removed to Poweshiek county, from there to Jasper county, thence to Red Rock, Marion county, where he devoted himself to the practice of medicine until the year of 1883, when he died and was buried in Red Rock.

Dr. W. A. Ardery was a native of Nicholas county, Kentucky, and was born August 25, 1820. When young he was taken by his parents to Indiana, where his early life was spent on a farm. Early in life he determined the practice of medicine as a profession. After thorough preparation under a preceptor, he attended lectures at Ohio Medical College in Cincinnati, was graduated in 1844 and commenced the active duties of his profession in Newbern, Indiana. On September 30, 1855, he came to Iowa and located in Keokuk county, where he practiced until

he came to Marion county in 1871. His death came suddenly when he was struck by a train on a railroad crossing near Knoxville, in 1882.

Dr. E. R. Wright was a native of Union county, Indiana, born December 25, 1824. When sixteen years of age he moved with his parents to Putnam county, Indiana, and in 1847 to Jasper county, Iowa. He has the distinction of teaching the first school in Jasper county. In the fall of 1850 he came to Marion county where he engaged in teaching and clerking in a store. In 1859 he went to California and returned to Marion county in 1862. In May, 1864, he enlisted in Company A, 47th Iowa, and was mustered out in October of the same year. In 1877 he located in Otley where he practiced medicine until his death.

(To be continued)

CHARLES EDWARD RUTH, M.D., F.A.C.S.
1861-1930

An Appreciation

Dr. Charles E. Ruth, who died in Des Moines, Iowa, December 11, 1930, was a man of unusual forcefulness of character. His independence of action was developed in early life when he was obliged to do arduous and unexpected work on the farm where he was raised. He had an ambition to do great things but realized that if he were to reach his ambition he must accomplish it through his own endeavor.



His early education was obtained, as was that of most boys of his time, in the country school. By teaching and hard farm work he was enabled to secure funds for a higher education including a college course in the Medical Department of the University of Iowa, graduating with the degree of M.D. in 1883.

For several years, at Atalissa and Muscatine, Iowa, he had the hard training of a country practice. With all the effort of this exacting work he continued his studious habits at all times. His early interest was centered in the study of surgical anatomy and he spent many nights in careful dissections.

His excellent training in anatomy brought him to the attention of the Faculty of The Keokuk Medical College, and he soon was called to the chair of Anatomy in this institution. His comprehensive knowledge of the subject, force of character and unbounded energy soon gained him the widest recognition. The students had great confidence in him and when later he was advanced to the chair of clinical surgery in the College he rapidly built up an important and instructive surgical clinic.

His constancy of effort and the amount of work he could accomplish was always the marvel of his associates. This never ceasing energy continued almost up to the time of his death, and probably enabled him to live, actively, longer than would otherwise have been possible.

His remarkable mechanical skill enabled him to meet many of the emergencies of his surgical work most successfully.

He was an active supporter of organized medicine, and his discussions before medical gatherings bore the mark of the teacher and were always listened to with interest and attention. All who knew Dr. Ruth prized his friendship and honored his attainments.

The sad news of his death brings many expressions of real sorrow from doctors and patients in all parts of Iowa as well as in the surrounding states.

He made an impression on life and much of his work, original in a high degree, will live long after he has gone.

His influence and teaching will endure in the lives of the students who considered it a privilege to be taught by him.

Frank M. Fuller.

THE JOURNAL BOOK SHELF

BOOKS RECEIVED

*BURNS—The Types, Pathology, and Management.—By George T. Pack, B.S., M.D.—Formerly Professor of Pathology and Lecturer in Minor Surgery, The School of Medicine, University of Alabama—and A. Hobson Davis, B.S., M.D., Instructor in Pathology, University of Alabama.—With 60 Illustrations.—Philadelphia and London.—J. B. Lippincott Company.—Price, $6.00.

*DISEASES OF THE DIGESTIVE SYSTEM—By L. Winfield Kohn, M.D., F.A.C.P.—Two Volumes—Illustrated with 542 Engravings, including 7 full-page colored plates.—F. A. Davis Company, Philadelphia.—Price, $12.00.

*DISEASES OF THE EAR—By Philip D. Kerrison, M.D.—Fourth Edition—Revised and Enlarged.—627 pages, 332 illustrations in text and 2 full pages in color. Philadelphia & London, J. B. Lippincott Company.

*DR. COLWELL'S DAILY LOG FOR PHYSICIANS for 1931—published by Colwell Publishing Company, Champaign, Illinois.

DOCTORS AND SPECIALISTS—A Medical Revue with a Prologue and a Good Many Scenes—By Morris Fishbein, M.D.—With Illustrations by Dan Layman.—Bobbs-Merrill Company, Indianapolis.—Price, $1.00.

*FIFTH INTERNATIONAL CONGRESS OF MILITARY MEDICINE AND PHARMACY—London, England, May, 1929, by Commander William Seaman Bainbridge, M.C.F. United States Naval Reserve, Member of Permanent Committee, Delegate from the United States. The Collegiate Press, Menasha, Wisconsin.

*GROWING UP—The Story of How We Became Alive, Are Born and Grow Up, by Karl de Schweinitz. New York: The Macmillan Company, 1930. 111 pages, 30 illustrations. Price $1.75.

*MEDICAL RECORD VISITING LIST, of PHYSICIANS DIARY FOR 1931—Revised.—William Wood & Company, New York.—Price, $2.00 net.

*MINOR SURGERY AND BANDAGING—For the use of house surgeons, dressers and general practitioners.—Twentieth edition.—By Gwynne Williams, M.S., F.R.C.S With 262 illustrations.—F. A. Davis Company, Philadelphia, 1930. Price, $3.50.

*OPERATIVE GYNECOLOGY—By Harry Sturgeon Crossen, M.D., F.A.C.S., Professor of Clinical Gynecology, and Robert James Crossen, M.D., Instructor in Clinical Gynecology and Obstetrics, Washington University School of Medicine.—Fourth Edition.—With 1078 pages, 1246 illustrations and 2 color plates.—The C. V. Mosby Company, St. Louis, 1930.—Price, $15.00.

*PERSONAL AND COMMUNITY HEALTH—By Clair Elsmere Turner, M.A., P.H.D.—Third Edition—The C. V. Mosby Company, St. Louis, 1930.—Price, $2.75.

RADIUM IN GENERAL PRACTICE—By A. James Larkin, M.D., D.N.B.—Illustrated—Paul B. Hoeber, Inc., New York.—Price, $6.00.

*THE PHYSICIAN THROUGHOUT THE AGES—Volumes I and II (Illustrated). By Arthur Selwyn-Brown, B.C., M.D., Ph.D., L.L.D. Springfield Printing and Binding Co., distributors, Springfield, Massachusetts. Price per set, $7.50.

*STEDMAN'S MEDICAL DICTIONARY — (Illustrated) — By Thomas Lathrop Stedman, M.D., Eleventh, revised edition. William Wood and Company, New York, 1930. Price, $7.50 net.

*TEXTBOOK OF MEDICINE—Edited by Russell L. Cecil, A.B., M.D., and Foster Kennedy, M.D., F.R.S.E. Second edition, revised and entirely reset. 1592 Pages. W. B. Saunders Company, Philadelphia and London, 1930. Price, cloth, $9.00.

*THE MEDICAL CLINICS OF NORTH AMERICA—Volume 14, Number 1. Octavo of 278 pages with 54 illustrations. Per clinic year, July, 1930, to May, 1931. Paper, $12.00, cloth, $16.00 net. Philadelphia and London: W. B. Saunders Company, 1930.

Review appears in this issue.

BOOK REVIEWS

BURNS

The types, pathology and management, by George T. Pack, B.S., M.D., formerly Professor of Pathology and Lecturer in Minor Surgery, the School of Medicine, University of Alabama, and A. Hobson Davis, B.S., M.D., Instructor in Pathology, University of Alabama. Sixty illustrations. Philadelphia and London, J. B. Lippincott Company. Price $6.00.

The book is divided in three parts. Part One deals with fundamental facts concerning burns and scalds, and includes history, etiology, incidence, classification, local changes, general tissue changes, findings in blood and urine, poisons produced in burns and scalds, symptoms and diagnosis, complications, prognosis and causes of death.

Part Two covers the management of thermal burns. This includes prevention, immediate treatment and systemic therapy, and management of minor burns of first and second degrees. Various types of treatments are discussed, such as wet dressings, immersion in water bath treatment, light therapy, open air exposure, occlusive dressings, paraffin, oils, ointments, powders, epluchage of severe cutaneous burns, care of granulation tissue, skin grafting, diseases of burns, cicatrices and the prevention and correction of deformities.

Part Three concerns regional burns and burns by specific agents; i. e., electricity, lightning, Roentgen ray, radium, sun, caustic chemicals and war gases.

The final chapter is on the medico-legal aspect of burns and scalds.

The monograph is well prepared, all phases of the subject being covered, some methods condemned and others approved.

Such works are well worth while. F.W.F.

DISEASES OF THE DIGESTIVE SYSTEM

By L. Winfield Kohn, M.D., F.A.C.P. Two volumes. Illustrated with 542 engravings, including 7 full-page colored plates. F. A. Davis Company, Philadelphia. Price $12.00.

This work, in the writer's opinion, is the most thorough and complete to be presented on this most important subject during the past five years. The author has kept in mind the needs of the student, the specialist and the general practitioner and has presented the subject of gastro-intestinal diseases in a straightforward, concise, orderly fashion with sufficient detail and technique to make the volume complete and yet with commendable selection of material enabling its production in less than twelve hundred pages. The views expressed, particularly in regard to treatment, in many instances will be found at conflict with those commonly taught in midwestern schools. Such conflict, however, is not proof of error in either teaching, since the automobile

or the railway may alike transport one with safety to a desired destination.

The logical presentation of the subject demands a primary consideration of anatomy, histology, physiology and physiological chemistry peculiar to the gastro-intestinal system in introducing this subject, followed by method and notes in history taking. Next appears a discussion of special methods of examination including the analyses of secretory and excretory products, fluoroscopy and x-ray. The various portions of the gastro-intestinal tract receive special attention and their distinctive diseases are carefully analyzed. The concluding chapter in the treatise is one prepared by the eminent surgeon, Dr. Zackary Cope of London, on surgery of the gastro-intestinal tract; a brief but particularly well written a resume' of the subject.

DR. COLWELL'S DAILY LOG FOR PHYSICIANS

For 1931. Being a brief, simple, accurate financial record for the physician's desk. Published by Colwell Publishing Company, Champaign, Illinois.

This book has been fashioned with care and understanding both in size and compass so that it offers the best and simplest solution of a physician's financial record which has come to my attention. The book contains some 400 pages providing a separate page for each day of the year with ample extra space for monthly and annual summaries, expense tables, special records and incidental memoranda. The large size of the page allows generous room for the patient's name, service rendered, time of service, charge made or cash received, etc., in appropriate columns. The thirty-two lines to the page should accommodate a very extensive practice; for a less extensive practice two lines or more could be assigned to the one item so that greater notes concerning the condition of the patient at the time seen could be recorded. For the physician making office appointments the book can be made to serve jointly as an appointment book and ledger. The system is built on the loose leaf plan and durably and handsomely bound in fabricoid.

OPERATIVE GYNECOLOGY

By Harry Sturgeon Crossen, M.D., F.A.C.S., Professor of Clinical Gynecology, and Robert James Crossen, M.D., Instructor in Clinical Gynecology and Obstetrics, Washington University School of Medicine. Fourth Edition. With 1078 pages, 1246 illustrations and 2 color plates. The C. V. Mosby Company, St. Louis, 1930. Price, $15.

This text on Operative Gynecology is an excellent companion for the text on Diseases of Women, by the same authors. It is one of the most complete treatises on gynecological surgery ever published. It explains every possible point of the surgical aspect of every gynecological condition with minutest detail and leaves no unanswered questions that could possibly arise in the mind of the reader. It is complete enough for the surgeon, yet understandable for the man who does little or no surgery and is written in a manner that is pleasing to all who are fortunate enough to read it.

It is well indexed and profusely illustrated both with drawings and photographs.

Since this book is not equalled or excelled by any book of similar scope on the market today, it is the reviewer's opinion that no doctor's library is complete without it.

THE MEDICAL RECORD VISITING LIST or PHYSICIAN'S DIARY FOR 1931

Revised. William Wood & Company, New York. Price, $2.00 net.

This small pocket-size visiting list is well known and largely used at the present time and needs but little comment. Adapted to fit the coat pocket or the medicine bag, it solves the problem of a memorandum for daily use. It is not intended to supplant other forms of permanent accounting but supplement and simplify such a system. Besides offering suitable space for recording visits on sixty patients per week, the book contains many tables of very practical value such as an obstetrical table, table of equivalents, dose table, emergencies in poisonings, signs of death, and even hints concerning the writing of a will.

This book is recommended for the purpose intended.

MINOR SURGERY AND BANDAGING

For the use of house surgeons, dressers and junior practitioners. Twentieth edition. By Gwynne Williams, M.S., F.R.C.S. With 262 illustrations. F. A. Davis Company, Philadelphia, 1930. Price, $3.50.

This book is intended for the use of house surgeons, dressers and junior practitioners.

It is rather difficult for the reader to see the real value of such a book in a field which is so well covered. The author is surgeon to the University College hospital, what college and what address the reader is unable to ascertain.

Practically all the illustrations on bandaging show the use of the left hand, of which we heartily approve.

Noted with considerable interest is the section which treats of rape, very well placed in a work on minor surgery. F.W.F.

GROWING UP

The Story of How We Became Alive, Are Born and Grow Up, by Karl de Schweinitz. New York: The Macmillan Company, 1930. 111 pages, 30 illustrations. Price, $1.75.

Most laymen feel that the discussion of fertilization, growth and birth, insofar as they must be explained to a child, are embarrassing problems and problems that, because of this embarrassment, can be deferred to some future time. Frequently such a parent will appeal to his family physician for

guidance. The fact remains, however, that even among physicians the same embarrassment frequently exists and he too must look elsewhere for aid.

This small volume, written by an expert in child psychology, a father and a scientist, is a most worthy aid, since it is written with a frankness which goes far toward satisfying the child's eagerness for information without stimulating lurid imaginings.

He begins his story by a discussion in the child's own language, of the processes of fertilization and reproduction as encountered in flowers. He next discusses the same processes with fish and lower mammals, finally arriving in a most logical fashion at the discussion of these essential processes in man.

This presentation stresses the universality of the processes involved and dispels the morbid curiosity frequently attendant upon such a discussion without this broad comparative basis. The author has presented the whole truth and has done so without circumlocution, which renders his discussion unique and delightful.

The volume is one unhesitatingly recommended to every physician who may personally face the problem of acquainting his own children with life processes or who may be called upon by his patients to recommend a guide for their use.

PERSONAL AND COMMUNITY HEALTH

By Clair Elsemere Turner, M.A., P.H.D. Third edition. The C. V. Mosby Company, St. Louis, 1930. Price, $2.75.

This volume has been written in a popular fashion for the use of students in universities, colleges, normal or professional schools. It treats in a semi-technical fashion problems of individual and community health, presenting the subject with a scientific background of hygiene and sanitation.

For the purpose intended the volume appears adequate.

FIFTH INTERNATIONAL CONGRESS OF MILITARY MEDICINE AND PHARMACY

London, England, May, 1929, by Commander William Seaman Bainbridge, M.C.F. United States Naval Reserve, Member of Permanent Committee, Delegate from the United States. The Collegiate Press, Menasha, Wis.

This report presents in their entirety some thirty or forty papers presented before the London Congress. The papers for the most part deal with conditions encountered during war activities. They cover both medical and surgical subjects. One group is devoted to the Method of Transporting the Sick and Wounded, a second to a discussion of Tropical Fevers, a third to Injuries to Blood Vessels and Their Sequelae, a fourth to Physical Agents Entering into the Treatment of the Sick, while the final section deals with the Standards of Dental and Physical Fitness for Military Services.

THE PHYSICIAN THROUGHOUT THE AGES

Vols. I & II (Illustrated). By Arthur Selwyn-Brown, B.Sc., M.D., Ph.D., LL.D., assisted by distinguished medical specialists. Capehart-Brown Co., Inc., publishers, New York, 1928. Springfield Printing & Binding Co., distributors, Springfield, Mass. Price per set, $7.50.

During the past few years great interest has been shown throughout the medical profession in the study of medical history. During this period of time several important histories have been written. "The Physician Throughout the Ages" should be listed among the best of these important contributions since it covers a very wide scope and is unique in its plan of presentation. The author has collected many charming essays dealing with medical progress from many outstanding sources, weaving them into a series of books which presents the march of medical progress in a most fascinating fashion.

These volumes should not be confused with those recitations of events and dates which, while furnishing an accurate record offer but little of interest to the reader. Each of these essays may be read independently of the others of that section and since they represent in many cases a compilation of thought they may be read with the assurance that the viewpoint is well taken.

The essays are so well written and compiled that the books can be read with fascination, which makes it unusually attractive both for the physician and the lay student. The two volumes contain more than four hundred illustrations selected with care and discrimination. A ready reference index together with chronologies add much to the volume for reference use. An important feature of the work is the unusually large clear type which together with the master workmanship both in printing and binding render the volumes pleasing from the physical aspect.

The reviewer is puzzled to know how such handsome, well written and beautifully bound volumes can be offered at seven dollars and fifty cents per set, but the fact remains that the books may be obtained at this figure from the Springfield Printing & Binding Company of Springfield, Mass.

STEDMAN'S MEDICAL DICTIONARY

(Illustrated)—By Thomas Lathrop Stedman, M.D. Eleventh, Revised Edition. William Wood and Company, New York, 1930. Price, $7.50 net.

The foundation for any medical library must be laid in books dealing with the so-called fundamental sciences. The cornerstone of such a library must be a complete and authoritative medical dictionary.

In the preparation of this eleventh revision of Stedman's Dictionary, the editor has realized a long desired objective. In 1908, Dr. Stedman felt a need for a dictionary which would furnish a uniform nomenclature and spelling for terms harmonious with the Latin or Greek derivation of the word employed. In attaining this objective the editor appreciated that progress must be made slowly. It is only in this

present 1930 edition that he has been able to realize his ideal and submit to physicians a dictionary which is both logical and correct.

The present revision incorporates the standard nomenclature as adopted by the American Bacteriological Society, the American Chemical Society, and the American Medical Association. A number of new plates and illustrations have been included and all obsolete material removed. The convenient size of the volume adds to its utility. This dictionary is outstanding, not only for the points of merit referred to above, but also because of the exactness and accuracy which has been developed through the untiring perseverance of the editor to make it the best. This dictionary is recommended for the use of physicians, students in medical and allied sciences, and all laymen requiring an usable and accurate definition of medical terms.

THE MEDICAL CLINICS OF NORTH AMERICA

(Issued serially, one number every other month.) Volume 14, Number 1. (University of California Number, July, 1930.) Octavo of 278 pages with 54 illustrations. Per clinic year, July, 1930 to May, 1931. Paper, $12.00; Cloth, $16.00 net. Philadelphia and London: W. B. Saunders Company, 1930.

This University of California number of this well-known clinic is dedicated to Dr. Lewellys F. Barker. In 1929, the University of California established a Visiting Lectureship in the Medical School. Dr. Lewellys F. Barker, Emeritus Professor of Medicine of Johns Hopkins University, was happily chosen as the first lecturer and spent four weeks as an active member of the medical faculty of the University of California. During this period of time he made daily ward rounds through the clinic, gave pathologic conferences and amphitheater clinics. The thirty-two amphitheater clinics and clinic-pathological conferences presented in this number, together with his one formal address, are reported in full.

The clinics are for the most part diagnostic clinics and cover a very wide range of medical subjects. The excellence of a master clinical teacher is reflected in each of these reports and the recording of this material in a single volume makes available a most outstanding contribution to medical science.

DISEASES OF THE EAR

By Philip D. Kerrison, M.D. Fourth edition, 627 pagees with 332 illustrations and 2 full pages in color. Philadelphia, J. B. Lippincott Company, 1930. Price, $7.50.

In this fourth edition of Dr. Kerrison's book the author has brought forward the more important developments in otology through revision of the sections devoted to the treatment of various aural lesions. The section dealing with the surgical treatment of otitic purulent meningitis has been completely rewritten and the chapter dealing with the surgical treatment of facial paralysis has been supplemented by a brief review of the important work of Sir Charles Ballance. A new chapter on the modern oral method of training the totally deaf child is an important addition to this text. The section on tumors of the eighth nerve is also of especial interest.

With its splendid illustrations and clear and concise style, the book can unreservedly be recommended to the profession as par excellent. R. R. S.

TEXTBOOK OF MEDICINE

Edited by Russell L. Cecil, A.B., M.D., Sc.D., Assistant Professor of Clinical Medicine in Cornell University; Assistant Visiting Physician in Bellevue Hospital, New York City; Associate Editor for Diseases of the Nervous System, and Foster Kennedy, M.D., F.R.S.E., Professor of Neurology, Cornell University; Head of Neurological Department, Bellevue Hospital. Second edition, revised and entirely reset. 1592 pages. W. B. Saunders Company, Philadelphia and London, 1930. Price, cloth, $9.

Some four years ago, when the first edition of this valuable work was released by the publishers, it met with immediate and hearty acceptance. During the past few years few writers have attempted to present a treatise covering the entire field of medicine, since with the advent of specialism very few authors consider themselves competent to discuss singly so broad a field.

This second edition follows the plan used in the former edition of having various sections of the book prepared by nationally and often internationally recognized authorities. In the present edition there are more than one hundred and twenty-five collaborators, representing the outstanding medical talent of America. In the form of presentation, the work resembles in many respects, the memorable and unsurpassed writings of Osler. We find here the same direct bed-side attitude, manifesting the fitness of the writer as master teacher and clinician.

While intended primarily as a textbook in medicine, because of the wide scope of subjects treated, its authoritativeness and inimitable style, it will be found most useful by any physician as a reference volume. Well selected illustrations appear at the close of each chapter and the entire volume is adequately indexed and cross-indexed.

INSUFFICIENT MILK FOR CHILDREN

At the recent White House Conference on Child Health held in Washington it was found that only 57 per cent of American children have enough milk each day. Three and five-tenths per cent of them use no milk at all—the rest have less than enough. Ninety-five per cent of all children were found to have defective teeth. The conference concluded that laboratory study and clinical experience indicate that the underlying causes of dental disorders lie within the field of mineral metabolism as regulated by dietetic control; that means in the use of the right food.

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SILAS WEIR MITCHELL, A MAN OF MEDICINE AND LETTERS*

TOM BENTLEY THROCKMORTON, B.Sc., M.D., F.A.C.P., Des Moines

Of the many learned men of medicine whom it has been my privilege to know, none stand out with such marked distinction as does the late Silas Weir Mitchell, physician, author, scientist.

At a banquet and reception given for President Taft and invited guests by the Medical Club of Philadelphia, in May, 1911, Dr. William L. Rodman, in presenting Dr. Mitchell, referred to him as "the most distinguished and widely renowned physician in America, Philadelphia's most illustrious citizen, medical author, historian and poet." Without question Dr. Mitchell has indelibly left his stamp on the medical and literary professions of the Quaker City, for it is impossible to disassociate this distinguished physician from the scientific and literary life of that community. It is but fitting and proper on the one hundred and second anniversary of his birth that, as members of a great profession, we should pause and pay homage to one who brought world renown and distinction to American medicine. To those who knew the man as he was, who followed his writings, both scientific and literary, nothing new perhaps will be added to their store of knowledge concerning him save, perhaps, the few personal recollections which I have incorporated in this presentation. Thanks to the Mitchell family, priceless letters and writings of a biographic nature were left concerning its various members, and especially by Dr. Weir, of himself, all of which were collected and arranged in exquisite narrative style by Anna Robeson Burr in her book "Weir Mitchell, His Life and Letters." The reading of this book kindled anew the memories of my former association with this great man and instinctively there came the urge to present to the members of the Library Club a brief review of his life, together with some personal reminiscences.

In order that we may better appreciate the subject of this sketch it is perhaps well to delve into his ancestry and take a glimpse at the stock from which he came. The great grandfather, John Mitchell, was at one time collector of excise at Dunfries, Scotland. His son, Alexander Mitchell, born in 1766, emigrated from Ayrshire to Virginia, sometime between 1786 and 1789. Here he practiced medicine and also farmed to some extent. From the Keystone state, Pennsylvania, came one Elizabeth Kearsley, to take up her abode in Shepherdstown, Virginia. Here she met the young practitioner and agriculturist and was married to him. To this union was born May 17, 1793, John Kearsley Mitchell, named John after his paternal grandfather, and Kearsley, his mother's maiden name. The mother was unable to nurse the babe and a colored mammy was substituted as a wetnurse. Misfortune and sorrow soon befell the Mitchell family. When young John Kearsley was four years of age his mother died and five years later his father succumbed, in his thirty-sixth year. The orphan child, destined to become the father of America's outstanding physician, was cared for during the next few years by his maternal grandmother, but with the occurrence of her death he was shipped abroad to his father's people in Scotland. Picture for a moment a lonesome boy of some twelve or thirteen years of age aboard a sailing vessel, destined for a far away country, seeking a new home in new surroundings, among people he had never known. Perhaps it was this unconquerable and indomitable power to override and overcome all obstacles and difficulties early manifesting itself in the orphan child that characterized so distinctively the son-to-be in his reactions to life's adversities and sorrows. The orphan, however, made much of his opportunities. Schooled at Ayr, the youth won prizes and medals in French, Latin, Greek, mathematics, philosophy and bookkeeping. During the war of 1812 he was the only American in Edinburgh. He returned to Virginia in 1814,

*Read before the Library Club, Des Moines, February 4, 1931. Acknowledgment is hereby accorded Anna Robeson Burr, Dr. Charles K. Mills, Dr. William H. Welch and Dr. W. W. Keen, for many of the personal and historical facts connected with the life of Weir Mitchell.

and entered the University of Pennsylvania the following year to begin the study of medicine. This was made possible through the good graces of some of his mother's relatives. For some reason he sailed for China in 1817 and once again, on his return in 1818, he took up the pursuit of medical study and graduated from the university, receiving his doctor's degree in 1819.

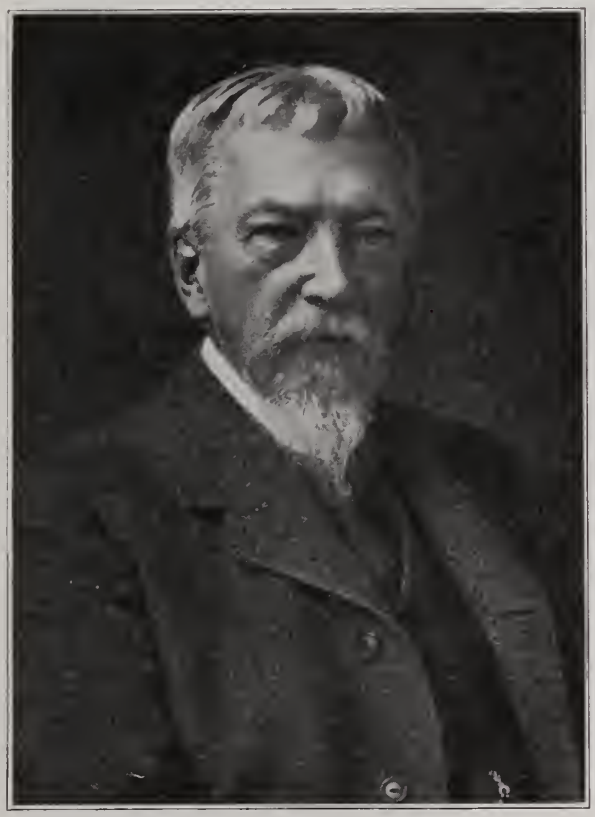
It was about this time that he fell in love with Sarah Matilda Henry, the daughter of Alexander Henry, one of Philadelphia's prosperous merchants, who lived at Sixth and Market Streets. Curiously enough the future father-in-law objected to the match, largely on the grounds of the young doctor's depleted finances, and once more we find Dr. John Kearsley Mitchell sailing for China. Absence evidently made the heart grow fonder for we find that John and Matilda corresponded during the intervening years, and on his return in 1822 they were married and the happy couple took up their abode at 119 South Fifth Street. Nine children came to bless the Mitchell family: Alexander Henry in 1823; Elizabeth Kearsley in 1825; Silas Weir, so named for a brother-in-law of his mother, February 15, 1829, followed by Sarah and Letitia; Robert Walsh, so named for that great lawyer, litterateur and historian; John Henry, who died in childhood; Nathaniel Chapman, named after that famous physician and one time president of the Philosophical Society, and Edward Donaldson, nicknamed Ned, so named after the captain with whom the father had sailed to China on one of his voyages.

In 1826, one year after the founding of the Jefferson Medical College, the young doctor accepted the Chair of Chemistry in the Philadelphia Medical Institute. Here he continued to teach until 1841, when he was called to the Chair of Practice of Medicine in the Jefferson Medical College. How well I recall the day I first stood in the doorway of that institution and observed among the few names carved in stone within the entranceway of the building the name of Mitchell, little dreaming it would be my opportunity shortly to sit at the feet of his son and of his grandson, in the further pursuit of my medical knowledge.

But enough of this digression. We learn from notes left by Dr. Weir that he was but an average boy, having his early religious fears, his escapades with his brothers, enjoying skating parties at a pond at Broad and Walnut Streets, sticking stray pigs, roaming in from the outlying Irish shanties, with pins set in sticks, and without question the instigator of the plan whereby a crust of bread was placed in the mouth of the skeleton, known to the children as "The French Lady," just prior to a house lecture given by his father to medical students. With pathos is also recorded the career of the younger brother, Edward Donaldson, who, entering the army as a medical cadet at nineteen years of age, later became gravely ill with diphtheria, became blind and partly paralyzed as a result, was brought home and later died, all of which caused his brother Weir one of the early acute griefs of his life, although it was later interwoven with many sorrows.

In 1844, when fifteen years of age, young Weir entered the University of Pennsylvania, but got on only fairly well with his studies and professors. A year later he spit blood, following which he was urged to spend much time out of doors, especially on the water in a boat. This out of door life increased his physical vigor at some expense to the intellectual. His three years of study at the university were good if not brilliant. In 1846, at seventeen years of age, his verses "To a Polar Star" were published in the Nassau Monthly. With the close of university life young Mitchell was faced with the choosing of his life's work. At first he thought of becoming a chemist, while his father suggested the mercantile trade, but the latter was not looked upon with favor by the young man, so as a compromise he decided to become a doctor, much to his father's disgust, who stated that the son had brains enough but no industry. As a result of the compromise young Weir entered the Jefferson Medical College, where he soon found his studies were by no means easy tasks. Dunglison's lectures on physiology, however, proved to be particularly interesting to him. The elder Mitchell was greatly desirous that his son become a surgeon, but apparently this field held no interest for the young medical student, who later remarked, "I fainted so often at operations that I began to despair. Moreover, my hands were awkward." Of his student days Dr. Weir, in after years, related an incident concerning the diametric teachings between his father and Professor Charles D. Meigs, about the use of ether. Ether having come into vogue the elder Mitchell was the first to employ its use in the practice of obstetrics. To such usage Professor Meigs was violently opposed, and on one occasion attempted to show the danger of the drug to the class at the Jefferson College. Ellerslie Wallace, afterwards my father's professor of obstetrics from 1875 to 1877, was at that time Professor Meig's assistant, and was charged with the administration of ether to a billy-goat before the class. In due time Professor Meigs pronounced the goat dead, and the remains were taken out and left in a small room near the main stairway, while the students were duly warned of the poten-

tial dangers of the anesthetic in childbirth procedures. As the students were descending the stairs following the close of the lecture, greatly impressed by the lethal effects of the volatile substance, they were suddenly startled, and later overjoyed, to see the supposedly dead goat charge between the long legs of Dr. Wallace, and descend the steps with the class. Not infrequently the elder Mitchell, as opportunity presented itself, would graciously inquire of his colleague Meigs concerning the welfare of his etherized patient.



Yours truly
S. Weir Mitchell

While to Caesar the Ides of March were but the closing days of his life's activities, to Weir Mitchell they were the threshold of a long and useful career, for we find him graduating from the Jefferson Medical College in March, 1850. Even at that time he had the ambition to hold a chair in either the Jefferson College or the University of Pennsylvania by the time he was thirty-five years of age. His graduating thesis was "On the Intestinal Gases." Later, with his favorite sister, Elizabeth, he went abroad a year for study. Here he met Paget and Jenner in London. While in Paris, he became ill with varioloid. His continued studies showed clearly that he liked physiology and microscopy best, and that he cared little for surgery. With the decline of his father's health, he returned home and began his medical career as his father's assistant, although his wishes were to be an interne in the Pennsylvania Hospital. Unfortunately, owing to some personal matter between the elder Mitchell and certain members of the Board of Trustees, this appointment was denied. The unwillingness of the son to take up surgery was a keen disappointment to the father. His early writings were on Snake Venoms, and his first published paper was "On Various Forms of Uric Acid Crystals." He continued his laboratory work on the side, and lectured on physiology before the Philadelphia Association for Medical Instruction. In 1855 the elder Mitchell sustained a stroke, following which the son carried on the father's practice as best he could.

In 1856 Dr. Weir fell in love with Mary Middleton Elwyn, and was married to her in October of 1858. This year constituted one of great happiness and great sorrow, for in the death of his father, which occurred a few months following his marriage, he lost his best friend. The father's estate amounted to but little and a former practice, resulting in some two thousand dollars a year income, soon dropped to half that amount. Upon the shoulders of Dr. Weir was thrust the load of caring for his widowed mother and sister Elizabeth, and the younger brothers, aged respectively twenty-two, seventeen and fourteen. In July of 1859 was born John Kearsley Mitchell, named for his illustrious and distinguished grandsire, under whom in after years it was my pleasure to serve my interneship.

As a result of hard work and marked industry, Weir Mitchell's clientele increased and we find him at the breaking out of the Civil War, on April 12, 1861, still devoted to the art as well as the science of medicine. His war work was largely confined to the United States hospitals immediately surrounding Philadelphia. His first appointment was at the Filbert Street Hospital, in October, 1862. Here he began to show interest in diseases of the nervous system and in wounds of the nerves. Since this was somewhat of an unexplored field, his army colleagues began to arrange for transfer of cases of this nature to his ward. As a result of this small but interesting nucleus, the Surgeon General of the Army created a small hospital for nervous diseases on Christian Street and here Dr. George

R. Morehouse, a classmate, became associated with Mitchell in this work. Soon the newly created hospital became too small and again the Surgeon General was obliged to increase the quarters to a special hospital of four hundred beds, situated in Turners Lane near Nineteenth. Here both Morehouse and Mitchell appealed to the Surgeon in Chief, Dr. Alden, for the appointment of Dr. W. W. Keen as Assistant Surgeon, which request was duly granted. Here, also, Dr. Jacob Mendez Da Costa, who became the lifelong friend of Weir Mitchell and in time a worthy successor of the elder Mitchell to the Chair of Practice of Medicine in the Jefferson Medical College, had charge of a ward which afforded him unlimited opportunity for the study of cardiac diseases and neuroses among the disabled soldiers. Da Costa's classic description of "soldier's heart," brilliant in that day, nevertheless lost none of its entitled lustre or scientific value when, during the late World War, similar cardiac conditions occurring among soldiers were considered under the more onerous title, "neuro-circulatory asthenia." Is it any wonder that American medicine was given a new impetus under the guiding and directing influence of Mitchell, Keen and Da Costa, all of whom reflected the influence of that great school, the Jefferson Medical College? True it is that of this triumvirate Mitchell never realized his one ambition, that of teaching physiology in either the Jefferson College or the University of Pennsylvania but, as he himself later said, it was perhaps for the best, as otherwise his interests would have been devoted to science and teaching rather than to neurologic research and literary attainments. In the Turner Lane Hospital, massage was first employed to palsied muscles resulting from nerve injuries or to tissues rigid from long splinted cases. Here also atropin was first used hypodermically for muscular spasms.

An ever increasing practice coupled with the heavy duties of hospital work finally became too severe a strain on Surgeon Mitchell, and in 1864 he obtained a couple of months' leave of absence and sailed to France and England for a much needed rest.

Perhaps Mitchell's activities during the war were increased by a desire to cover up the great loss caused by the death of his wife in 1862. Seven months after the birth of a second son, Langdon, the young mother contracted diphtheria from her first born, John Kearsley, and succumbed to that disease. It will be recalled that Dr. Weir's youngest brother died from the sequelae of the same disease and in later years the idol of his heart, an only daughter, was to pass by the same unkind fate due to the Klebs-Lœffler bacillus. It may not be altogether out of place to mention here the sorrow and struggle which were his in so large a portion for one so young. His father died in 1858, his brother Edward soon followed, his young wife was taken from him leaving two motherless boys to be cared for, his devoted sister Elizabeth became an invalid and suffered great physical pain, his roving brother, Walsh, met a tragic end in the West Indies, and he lost his mother; such were the sorrows he was destined to endure while bitter disappointments from a professional point were likewise heaped upon him. With it all, however, he kept a cheerful disposition and apparently worked the harder as a solace and balm for his grief.

To be eminently successful in medicine, teaching in a college was considered of first importance, since the holding of a chair was an expression of confidence of the profession in the ability of one of its members. When the Chair of Physiology at the Jefferson College became vacant in 1863, it was not his fortune to be called to fill it, nor was he any more successful in his attempt the same year to obtain a similar position in the University of Pennsylvania. Five years later his staunch friends and backers urged, without avail, his appointment to the chair made vacant by Dr. Robley Dunglison, of the Jefferson faculty. In consoling the defeated candidate, Dr. Oliver Wendell Holmes, himself famous as an anatomist in the Harvard Medical College and a man of literary eminence, wrote as follows: "Perhaps it is hardly desirable that an active man of science should obtain a chair too early, for I have noticed that the wood of which academic fauteuils are made has a narcotic quality which occasionally renders the occupants lethargic, somnolent, and even comatose!" During his lifetime, Dr. Mitchell was the recipient of many honors and honorary degrees, both at home and abroad, and his alma mater, the Jefferson Medical College, did recognize and reward his ability by conferring the honorary degree of Doctor of Laws on him at the annual commencement in 1910, a ceremony which it was my pleasure to witness.

While without doubt Mitchell was deeply disappointed in not receiving an appointment to a chair, yet it would seem that the lack of appreciation of his ability and efforts only served as a stimulus for greater and better work on his part. His published papers on nervous maladies increased his practice enormously, which eventually became one of the largest, if not the largest, in all Philadelphia and made him the leading consultant in nervous diseases. Gradually he was obliged, on account of increased demands, to give up general practice and confine his efforts to a strictly neurologic field. At one time his annual

income was sixty-four thousand dollars, but the strenuous work bade fair to break down his physique, and to avoid this we find the overworked physician willing to lessen his income by taking more frequent and longer vacations. Dr. Mitchell was always casting about for something literary. Had he followed his own inclination, free from financial cares, he probably would have been a man of letters only. That his mind dwelt on such is evident in "The Case of George Dedlow." Having observed a soldier who had lost both legs and both arms in battle, he began to write a history of such a person, but was at a loss for a name for his created character until one day he perchanced to see the name "Dedlow" on a jeweler's sign, and at once he chose the name for the fictitious man with the amputated extremities. So real was the case of George Dedlow that many inquiries were received by the author after the publication of the story in the Atlantic, and even money was sent to the unfortunate sufferer, supposedly a patient in the Stump Hospital in Philadelphia. That Dr. Mitchell's mind subconsciously ran to the literary is illustrated by an incident related to me some years ago by one of my patients. As a result of middle ear infection a facial paralysis had ensued, and learning of the work of nerve transplantation by Dr. Keen this good lady sought his surgical advice at the Orthopoedic Hospital and Infirmary for Nervous Diseases. Here Dr. Keen asked Dr. Mitchell to see the patient and on entering the room he was formally introduced to Miss Maize Vernon, of Iowa. After a moment of thoughtfulness on his part the great physician extended his hand, and slowly remarked, "Maize Vernon! What a wonderful name that would be for a character in a novel."



With the compliments of
S. Weir Mitchell

Without question, Mitchell's interest in nerve palsies came about as a result of his vast war experiences. Together with Morehouse and Keen he wrote a book, "Gunshot Wounds and Other Injuries of Nerves," which was published by Lippincott, and which was based on notes taken from some two thousand cases. Five years following the close of the Civil War came Dr. Mitchell's appointment to the Orthopoedic Hospital, which was then located on Ninth Street, south of Market. A few years later, in 1872, the institution was moved to its present location at Seventeenth and Summer Streets, where its name was changed to the Orthopedic Hospital and Infirmary for Nervous Diseases. Here a great outpatient clinic for nervous diseases was developed, and intensive intramural study was done on selected cases. Here the world-renowned "Weir Mitchell Rest Cure" had its beginning and development. Here for almost a third of a century the leading personality of this institution was to be found laboring diligently among the sick and afflicted, teaching and working, surrounding himself with an able corps of investigators and clinicians, bringing renown to himself and to American medicine. About this time he became interested in a vasomotor neurosis involving the lower extremity, in which redness, pain, and disturbed circulation were the main features. Further study of this rare clinical entity convinced Mitchell of the originality of his observation, and in 1878 he fully described it under the caption "Erythromelalgia," which soon became known as "Mitchell's disease."

During this time of service Dr. Mitchell wrote one hundred and nineteen neurologic papers, to say nothing of the many, many other articles along physiologic, pharmacologic, and toxicologic lines, as well as many addresses and miscellaneous

papers. In the Infirmary were placed by him such assistants and staff members as Dr. William Osler, Dr. Wharton Sinkler, Dr. Morris J. Lewis and Dr. John K. Mitchell. It was in this institution, rich in medical tradition, that I served my interneship after graduation from the Jefferson Medical College, taking up my duties on New Year's day, 1910. Through the kindly efforts of my preceptor, Dr. Frank P. Norbury, of Jacksonville, Illinois, and my teacher and master, Dr. Francis X. Dercum, I had obtained the coveted residenceship, the first, as far as I know, to be obtained by a western man. It was here I first met the Mitchells, father and son; Dr. Charles K. Mills, Professor of Neurology in the University of Pennsylvania, who, together with Dr. Charles H. Frazier, did notable work in cerebral localization; the Sinklers, father and son; Morris J. Lewis, a classmate of the late Dr. James Taggart Priestley, and many other eminent men interested in clinical neurology. I was the last resident physician to serve the elder Sinkler, and the first to serve his successor, Dr. Charles W. Burr, Professor of Psychiatry in the University of Pennsylvania.

Well do I recall my first introduction to Dr. Weir Mitchell. A few weeks after taking up my work in the Infirmary, I was notified by the colored porter that Dr. Weir Mitchell was present and wished me to join him. Together with a head nurse I accompanied Dr. Mitchell on his visit to a private patient of his son, Dr. John Mitchell. The usual custom in making rounds with a staff member was for the resident physician, and oftimes the nurse, to stand outside the door to the patient's room while the visiting physician waited on the patient. As a result of the many hours I was thus obliged to stand in the hallways, for the first time, and I am happy to say the last, I developed callosities on the soles of my feet, which disappeared only after many months following the completion of my service. In this instance, however, to my great surprise I was invited to accompany Dr. Mitchell into the patient's room. Here the nurse presented Dr. Mitchell to the good lady, who at the sound of the name immediately arose to a sitting posture in the bed and, with a surprised and almost incredulous expression on her face, exclaimed, "Surely this is not Dr. S. Weir Mitchell?", to which the distinguished physician replied in a rather humorous tone of voice, "Yes, madam, this is the real Dr. Mitchell." Never before, nor since, have I ever witnessed one who could with almost uncanny precision sum up a situation in so short a time as could the elder Mitchell. Nothing, it seemed, escaped his observation. In almost a glance he was master of all he surveyed. His attitude toward me, then a young and inexperienced physician, was something that I have ever cherished and held most dear in my memory. After looking over the patient, relating the salient points of interest in the history and physical findings, the dear old gentleman turned to me and said, "Now, Doctor, let us suppose for the moment that this lady is your patient. What do you think would be best to do for her? Let us just talk it over between ourselves." To say that I was flabbergasted by such an unexpected turn of affairs is to put it extremely mild, but somehow I managed to make some suggestions which apparently met with the consultant's approval and the orders were so written on the chart. As Dr. Mitchell was preparing to leave the hospital it became my pleasure to assist him in putting on his over wrap, a garment having a long cape attached, which made its wearer stand out with increased distinction. His kindly, piercing eyes, his almost chisled-out features, the fine hair and rather sparse beard, likened at one time by John Singer Sargent, the portrait artist, to "spun-glass hair," the slightly stooped shoulders of the spare, lean man, all made an impression on my mind which only time can efface. In return for my apparent courtesy, Dr. Mitchell proffered me a black cigar, which as a non-smoker I was obliged to decline. To my great surprise the elderly gentleman asked, "Young man, where are you from?" Learning that I was from Iowa, he replied, "That is rather strange. We usually get our internes from Virginia and the south." After a moment's pause, during which he ran his slender fingers through his beard, he leveled his eyes on me and in a tone of voice I can never forget, said, "Young man, I am always suspicious of one who has none of the outer evidences of the lesser vices." It was not, however, until some eleven years later, in spite of this admonition, that I learned to flirt a little with Lady Nicotine.

Just as I always found the elder Mitchell kind, courteous and considerate, so did I find his son, Dr. John, under whom I served for a year. So have I always found the great men, eminent in our profession, while from many of those destined to play a lesser rôle have come the unpleasantries connected with my medical career. During my interneship the Mitchells were my inspiration. On one occasion I recall staying up at night, making repeated examinations of a patient's blood in whom Dr. Weir suspected the presence of the filaria sanguinis hominis.

Again, as my year's work was drawing to a close I was invited by Dr. Mitchell to call at his office. I was at a loss to know just what the elderly gentleman had in store for me, and it was

with some trepidation, palpitation, and undue perspiration, even though the weather was wintry, that I approached the office and residence at 1524 Walnut Street on an afternoon in late December. The nameplate on the window at the left of the front door arrested my steps before the four story building of stone and brick, so typical of old Philadelphia. The customary and traditional marble steps with a railing on either side ushered one from the street into the hallway and reception room. Here the secretary took the visitor's name and in due season one found oneself admitted to the consultation room. Only those whose privilege it has been to enter this room can appreciate its fittings and its appointments. On this particular afternoon Dr. Mitchell was dressed in a velvet coat and received me with as much cordiality as though I had been an old friend or a patient of prominence. He chatted with me at some length, inquiring about the Infirmary and its needs, how I had enjoyed my work, and eventually led up to the all momentous question which comes to every medical man, as to what I was going to do now that I had practically finished my year's work. Perhaps my answer was somewhat faltering and indefinite, to which the good doctor replied that if I had no objection he would be pleased to offer some advice. "Young man," he said, "you have been with us at the Infirmary for almost a year and I find your work has been very creditably performed. My son, Dr. John, has grown quite fond of you and tells me you have been very attentive to his patients. Now that you have been with us, and no doubt have absorbed much in neurology, I would not have you feel that you are a specialist. The field of medicine is a broad one, and many years are necessary for one to acquire a knowledge of disease and proficiency in treatment. My son, Dr. John, practiced general medicine for ten years or more before he began to limit his work. I, myself, was a general practitioner for many years until circumstances led to the limitation of my work to the field of nervous diseases. My advice to you, young man, is to do general practice for a term of ten or fifteen years, or even more, and if by that time your interest in the field of nervous disorders has not waned, you may feel yourself on a secure foundation for the specialty of neurology." That was the last time I ever saw Dr. Weir Mitchell. I thanked him as best I could for the kindly interest he had shown in me, and for the fatherly advice he had given. Earlier in the year I had, with temerity, asked for an autographed photograph of himself, and was told if my services warranted the same I should receive it. Reminding the good doctor of this promise, he quickly drew from his desk a photo, autographed it, bade me every good wish for a successful career, and with throbbing heart and light feet, I departed. Perhaps Dr. Mitchell's reference to the specialties was an old hobby, for we find in his president's address before the Congress of American Physicians and Surgeons in 1891, the following allusion: "Specialty in medicine first arose by the wholesome and gradual evolution of the individual specialist out of the general practitioner, but today the special physician is medically born, and is too apt to select his branch before he is weaned from the breast of his alma mater."

Dr. Mitchell had a humorous side and was fond of telling anecdotes about himself. One year while abroad it is related how he called, incognito, on a very noted nerve specialist in Paris, and presented to him a varying number of complaints of the neurasthenic syndrome. Learning from the supposedly bona fide patient that he was from the States and would shortly return home, the eminent consultant, none other than the distinguished Charcot, recommended that the patient go to Philadelphia on his return and consult Dr. Weir Mitchell, who "knew more about those troubles than anyone else." On another occasion it is said that a Jew called at the office, desiring to consult the doctor relative to his ailments. Inquiry from the secretary was such that Dr. Mitchell received patients by appointment only. This, of course, paved the way for the all momentous question as to the fee charged for office consultations. The secretary replied that the fee was so much for the first visit, and a lesser amount for subsequent ones. The patient then seated himself near the door opening into the consultation room and as soon as Dr. Mitchell opened it to receive the next patient, the good Jew rushed forward, clasped the doctor by the hand and after a vigorous handshake exclaimed, "Oh, Dr. Mitchell, I am so glad to see you *again*." The sequel to this incident, so it is said, was climaxed by Dr. Mitchell writing a *new* prescription for the *old* patient. Once during the year I was serving at the Infirmary, Dr. Mitchell absented himself for a considerable period of time, and on the occasion of his next visit to the institution one of his colleagues remarked that it had been a long time since the doctor had seen fit to grace the institution with his presence. The elder Mitchell, with a twinkle in his eyes, replied that his absence had in part been due to the fact that he was obliged to do "a little country practice," having been called over to Detroit to see a patient.

Perhaps the most important work done by Dr. Mitchell, certainly the one which placed his name before the medical world, was in connection

with the Weir Mitchell Rest Treatment. Just how this came about was perhaps never fully explained by the author. The beneficial results of rest, massage, electricity and full feeding as individual therapeutic adjuvants were already known to the profession, but their co-ordinated use was unheard of, and it remained for Dr. Mitchell to be the first to apply these simple physiologic agencies in the treatment of disease. Dr. W. W. Keen states that he believed his friend's "yeasty mind" began to work on the subject after observing the benefit of rest in two cases in which the patients suffered simultaneously from a broken limb and from an acute nervous malady. Here the enforced rest was observed to mend, not only the broken limb, but the irritated nerves as well. Likewise it is said that at one time Dr. Mitchell gave to Sir William Osler a long account of the discovery of the "rest cure," and dated its development from a case in which exercise prescribed by others had failed to benefit the patient, but in which, with no other alternative in view, prolonged rest in bed brought about a happy result. It was not, however, until 1877 that direct reference to the rest cure was given to the profession through the printed page. When the Medico-Chirurgical Faculty of Maryland extended an invitation to Dr. Mitchell to be the chief speaker at its annual meeting in Baltimore, the opportunity was given the author to express his views on the subject. Accordingly he prepared and read a paper "On Extreme Measures in Therapeutics" before that body, a paper destined to arouse both hearty applause and sharp criticism. In true literary style the author enumerated the rise and fall of well known therapeutic measures, baths, various drugs, bleeding and dietaries, summing up his article in a masterful way by giving his results in functional nervous patients treated by rest, massage, diet, faradism and isolation. Without question Dr. Mitchell often obtained results by his methods which were not duplicated by others, showing that in this, more than in any other type of practice, the personal handling was the whole matter. The author always insisted from the beginning to the last that in establishing the rest treatment he had brought into use no new therapeutic agency, but had merely co-ordinated and made systematic use of various curative measures long known to the medical profession.

With the institution of the "rest cure" and the publication of results obtained, the author was assailed at home and abroad by some who referred to the treatment as savoring of the quack and charlatan, and by others who, from observation, had noted and acclaimed the wonderful results not heretofore obtainable in certain types of patients, as a distinct and creditable forward step in the field of medical therapy. At the Infirmary for Nervous Diseases, Dr. Mitchell surrounded himself with an able staff of younger men who became enthusiastic over their leader's methods and, under his inspiration, spread the gospel, so to speak, to the far parts of the country.

Dr. Mitchell was one of the founders as well as the first president of the Philadelphia Neurological Society. On the occasion of the twentieth anniversary of the society in 1904 he presented as his contribution a special article on "The Evolution of the RestTreatment." Here, in a brief yet fascinating manner, he relates the simple story of the beginning of a new mode of treatment in which at first rest played the important rôle. Gradually, as necessity demanded and experience indicated, were added massage and passive motion, further muscular stimulation by faradism, full feeding and isolation. True it is, that we hear far less of this particular kind of treatment today, just as we hear far less of the diagnosis of neurasthenia, so prevalent a quarter or more of a century ago. Thanks to instruments of precision and improved laboratory methods, the profession of today has a keener insight into the ductless gland syndromes and the effects of glandular dysfunction than perhaps Weir Mitchell ever dreamed of. The use of physiologic rest methods, however, did bring results and in the hands of the able and sympathetic practitioner proved a boon for many who otherwise would have been subjected to a life of invalidism.

While as physicians we are naturally interested in those affairs of Weir Mitchell's life which have to do with the science and art of medicine, still we should not lose sight of the fact that he was just as great a man in letters and literary attainments as in medicine. His inclination to the literary was early manifested in some of his writings, but it was more in the later part of his life that real literary and classic gems came from his pen. Perhaps the most widely read of his novels were "Hugh Wynne," published in 1896, and "The Red City," published in 1907, for both of which the author received handsome financial remunerations. Dr. John K. Mitchell once related to me how his father was desirous of learning just how long it would take a horse to travel a certain distance. The information was imperative inasmuch as it concerned a horseback ride taken by one of the characters in a novel which his father was then writing. Being a good horseman, Dr. John was charged with the task of riding his saddle-horse over the predetermined route, thus making the time consumed by the fictitious rider not only authentic but beyond dispute.

Compilation of Dr. Mitchell's various writings shows that some two hundred and fifty-eight subjects, medical, scientific, literary, and miscellaneous, have been contributed by this versatile man. Surely the petulant remark of the father "that the son had brains enough, but no industry" was more than disproved by the indefatigable spirit of the son, who rose to high prestige in medical and literary circles through sheer industry aided by native ability.

Much could also be said of the social life of Dr. Mitchell, for he was gregarious by nature and loved to mingle with his friends. One in particular and outside of the medical profession, he dearly loved, for the good doctor found in Phillips Brooks, a bishop in the church, a true gentleman, a scholar, and a trusted friend. A few weeks ago Christmas cheer was upon the world. Everywhere throughout civilized lands appropriate songs were sung to the Saviour of Men. It was Phillips Brooks who once asked his friend Mitchell to write a Christmas hymn and when the doctor declined, praying inability as his excuse, it was from the pen of this great churchman that the world was given that beautiful hymn, "The Little Town of Bethlehem." Thus we see how, through a declination, another was spurred to great efforts, and yet, who can tell but that had Dr. Mitchell tried to carry out his friend's wish perhaps even a greater Christmas hymn might be ours to share.

But as in everything in life there must be a beginning and an ending. For over four score of years Dr. Mitchell was a familiar figure on the streets of the Quaker City. During this long and useful period he endeared himself alike to colleagues, friends, and multitudes of grateful patients. To Philadelphia medicine he brought credit and distinction, not alone locally, but nationally and world-wide as well. As a man of letters, he had the self-satisfaction of rising to fame not before accorded to one of medicine aside from Dr. Oliver Wendell Holmes, of Boston. As an honored citizen, his devotion to his native city was shown in divers ways. For many years he was on the Board of Trustees of the University of Pennsylvania. One year a Weir Mitchell Christmas calendar made its appearance in Philadelphia, a fitting testimonial to one who had contributed so richly to the life of that community.

And so in the sunset of a well spent life, we find the shadows deepen and the twilight pass into that darkness which is but dispelled by the light of eternal day, and on January 4, 1914, after an illness of but five days, with influenza, the spirit of Weir Mitchell winged its flight to that house not made with hands, a transposition such as he had wished, and which he had so well depicted in one of his lyrics:

> I know the night is near at hand
> The mist lies low on sea and bay,
> The autumn leaves go drifting by
> But I have had the day.
>
> Yea, I have had, dear Lord, the day
> When at Thy call I have the night,
> Brief be the twilight as I pass
> From light to dark, from dark to light.

Weir Mitchell is dead, yet he still lives in the hearts of many who were privileged to know him. Weir Mitchell is dead, but American medicine is the greater, the richer, the better for his having lived. Weir Mitchell is dead, yet he still lives.

RADIATION IN PELVIC DISEASE*

John F. Herrick, M.D., Ottumwa

The first and fundamental requisite in the successful treatment of disease is a correct and comprehensive diagnosis. No one will gainsay the necessity of a correct diagnosis, but it is equally important to make the investigation comprehensive so as to include all serious departures from normal; otherwise the treatment administered, while proper for some phase of the case, may fall short of a cure because of failure to take into consideration diseases other than the one most pressing at the time. This is quite as true of diseases of the female pelvic organs as of any other. There was a school of surgery some years ago that tabooed careful and searching methods of diagnosis, declaring that such methods were tedious, uncertain in their results and unnecessary; that the aseptic scalpel was all sufficient to lay bare the disease and properly care for it. Some of that school are still with us.

Surgery has been and probably always will remain the most efficient method of treatment in many pelvic diseases. Its effectiveness and limitations are now quite well known and the wise surgeon carefully discriminates in his selection of cases for operation. Since the discovery of the X-ray and radium, another instrument has been made available for the treatment of some of the diseases of the pelvis.

It required time to determine the indication for and the limitation of surgical treatment; so it has taken time to determine the uses and limitations of radiation in these diseases. Now, however, there is at hand sufficient information on the action and limitations of the various methods of

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treatment to make their use scientific and correspondingly effective.

Radiation is a two-edged sword and in incompetent hands may be as destructive as ill-advised surgery or other powerful agents. A pathological diagnosis is necessary and a careful selection of cases must be made. Discredit may be brought on any method of treatment if applied in unsuitable cases. Proper dosage should be determined and given under measured control as to voltage, milliamperes, filter, distance and time. The output of the X-ray machine or radium and the dose reaching the seat of the disease should be measured and recorded. None but a qualified physician should prescribe dosage in radiation, any more than he would undertake a serious surgical operation.

In a carefully selected list of pelvic diseases radiation is as effective or even more effective than any other treatment and with a minimum of danger to life. When radiation is mentioned in this paper, the rays from radium or X-ray are meant. Other forms of radiant energy are not included.

Taking up specific diseases, it may be said that inflammatory diseases of the pelvis, including all infections, should not be treated by radiation. They are best treated by rest and therapeutic methods other than radiation. The condition often requires surgical intervention at some time. It may be possible that the exudate remaining long after the inflammation and infection have completely disappeared may be dissipated by carefully administered radiation; each case must be determined on its merits.

Tumors of the ovaries, whether cystic or solid, are rarely fit cases for radiation, but are more properly surgical. If it is found at operation that an ovarian tumor is malignant, postoperative X-ray treatment should be given.

Radiation is now considered by many as the treatment of choice for uterine fibroids. This is true within certain limits. Myomectomy is advisable in women under thirty-eight unless there exists some condition which makes it advisable to bring about the menopause, when radiation becomes first choice. Radium or X-ray may be applied; however, the X-ray seems the more desirable of the two.

Radiation treatment of fibroids gives a lower morbidity and mortality and rarely calls for hospitalization. If, however, a fibroid is so located as to cause pressure because of impaction, surgical removal is advisable. Very large tumors rising above the umbilicus, and occasionally smaller ones, do not always completely disappear following radiation, but what remains is innoxious. Pedunculated fibroids should as a rule be treated surgically. Large, submucus fibroids, especially if sloughing, are surgical.

Some women with large fibroids pass the menopause but later develop a bloody discharge. These cases call for very careful consideration since they have already become malignant or are potentially so. A carefully planned combination of radiation and surgery apparently gives the best results. Large fibroids of years' standing which do not atrophy following the menopause should be removed since they usually have areas of degeneration which do not respond to radiation and may in time be the seat of malignant degeneration.

Menorrhagia and metrorrhagia are usually proper cases for radiation unless there is some cause which demands surgical measures, such as retained secundines, etc. Excessive menstruation in young girls should be faithfully treated by conservative methods, rest, tonics, etc., before anything more radical is advised. There are some cases that do not respond to conservative methods. In such, X-ray treatment of the ovaries gives very satisfactory results. Curettage rarely benefits these cases, since the disturbance is seldom due to disease of the endometrium but rather to disturbed ovarian function. The dosage should be small and given cautiously. If properly administered it will do no permanent injury.

CANCER

In no other condition has radiation made so much advance as in the treatment of cancer of the uterus. It is rapidly becoming the method of choice. Prevention should be the watchword. If all cases of chronic inflammation and erosion of the cervix, either within or without the canal, were treated early with radium, there would be few cases of cancer of the cervix. Neglect, usually on the part of the patient, but too often on the part of the doctor, allows these women to develop cancer. Cancer of the cervix may develop in the twenties or as late as seventy.

When cancer of the cervix has appeared, available statistics show a greater percentage of recoveries in the hands of competent radiologists than after surgical treatment. Morbidity and mortality is less and hospitalization is reduced to the minimum. For years there has been much discussion and study devoted to the question of treatment in this disease. In the last five years the drift is rapidly toward radiation either by radium or a combination of radium and X-ray. In the majority of early cases good results may be obtained by surgery or cautery. However, in these early cases as good or better results are obtained by radiation. In the more advanced but still operable

cases, radiation shows a great improvement in the number of cures over any other method.

The treatment of advanced cervical cancer is discouraging whatever method is employed. Here again greater palliative results may be had from radiation and even an occasional complete five year arrest is secured as compared with other methods.

Cancer of the cervix, if seen early and if accompanied by some other disease of the pelvic structures requiring laparotomy, may best be treated by radium followed shortly by hysterectomy. The preoperative radiation will certainly lessen the probability of return of the disease.

Until recently the consensus of opinion has been in favor of complete hysterectomy in cancer of the body of the uterus. Radiologists as well as surgeons have agreed on this. Recently, improved methods of measurement of radiation, together with greater experience, have led to a slight change of opinion favoring radiation. An original article by Wm. P. Healy and Max Cutler, in the April, 1930, issue of The American Journal of Obstetrics and Gynecology reports 100 cases of carcinoma of the body of the uterus treated by radiation in the Memorial Hospital, New York. They make an exhaustive study of each case and classify them as to age of patient, extent of disease, character of cell, etc. Finally in summing up they say: "The combined results in eighty-two cases of operable fundus carcinoma treated by radiation alone shows 58.5 per cent cures. These results compare favorably with the best statistics in the surgical treatment of this disease and demonstrate that the progress of fundus carcinoma may be at least as good as by surgical methods." "The decision between radiation and operation in fundus carcinoma must for the present depend upon the circumstances in each individual case, taking into account such factors as hystologic type, technical operability, stage of disease, general or constitutional or local complications."

This report of the Memorial Hospital tends to confirm what was said in the early part of this paper, that the first requirement before any treatment is undertaken is a correct diagnosis.

In conclusion the paper may be summed up as follows:

First—The first requisite in the case of any disease is a correct and comprehensive diagnosis.

Second—Treatment by radiation requires carefully controlled and measured dosage administered by a qualified physician.

Third—A discriminating selection of cases suitable for radiation must be made to secure satisfactory results.

Fourth—In general, radiation is contraindicated in infection and acute inflammatory disease of the pelvis.

Fifth—Ovarian tumors are not suited to radiation treatment except that in malignant disease of the ovaries, radiation before and after removal will give best results.

Sixth—In uncomplicated fibroid tumors in women between thirty-eight and fifty years of age, radiation is the treatment of choice, while myomectomy is preferable in younger women and a combination of radiation and surgery in those over fifty or fifty-five.

Seventh—Cancer of the cervix yields better results when treated by radiation than by any other method. In a large percentage of disease of the cervix early treatment with radium is our best preventive of malignant degeneration.

Eighth—Recently it has been demonstrated that cancer of the body yields as readily to radiation as to surgery.

Ninth—Details of technic are omitted since they must be determined in each individual case by a competent radiologist.

Discussion

Dr. Arthur W. Erskine, Cedar Rapids: I wish to emphasize in the few moments I have to discuss Dr. Herrick's paper, the choice of the method of treatment of uterine hemorrhage. There are three things to be done for uterine hemorrhage. The first is nothing, and that is often done. The second is surgery, and the third is radiation.

In my opinion there are two positive indications for the surgical treatment of uterine hemorrhage. The first is the presence of a large tumor which produces pressure. While it is true that some of these tumors can be satisfactorily reduced by x-ray treatment, it takes so long and it is so burdensome to the patient that she is better off if she has an operation at the start. The second positive indication for surgical treatment is the presence of other disease which requires surgical intervention. It would be foolish to subject a patient to the expense and trouble and unpleasantness of treatment by radiation if she is going to have an operation after all. On the other hand, there is, in my opinion, one positive indication for treatment of uterine hemorrhage by radiation, and that is when the hemorrhage is so long continued or so severe that the hemoglobin has been reduced to sixty-five per cent or less. Too many of these patients will die if they are submitted to hysterectomy to justify its being used, no matter what the size of the tumor, and this is especially true when we have such an efficient method of controlling hemorrhage as radiation.

Of course there are a large number of women with severe and long continued uterine hemorrhage in which the positive indications for surgery or the positive indications for radiation are not present, and

I believe it is perfectly proper to set forth to these patients the advantage and the disadvantages of both methods of treatment and to let them make their own choice. The advantages of surgery are: First, it is quick, and second, it is certain. The disadvantages are: There is a small amount of danger, an anesthetic is necessary, hospitalization is necessary, and it is comparatively expensive. The advantages of radiation are that it is safe, no anesthetic or hospitalization is required; as a general thing the patient can go about her business, and finally, as compared with hospitalization and surgery, it is inexpensive. The disadvantages, however, are: First, control of uterine hemorrhage by radiation is slow, and second, about half the patients have some nausea and discomfort following the treatments.

PROLONGED BED REST IN TUBERCULOSIS*

CHARLES F. TAYLOR, M.D., Norton, Kansas

Really, in thinking over this paper, it has evolved itself into a consideration of what factors to consider in getting the patient out of bed. The question of prolonged bed rest in tuberculosis has been raised so frequently that it seems almost trite to mention its desirability, yet when checking up on the various forms of practice in this respect I find a big variance, ranging from absolute bed rest of a few weeks to a few years. Most of the excuses offered to account for very short bed rest are that the available bed space for this purpose is not sufficient and that patients must be got up and on some form of semi-ambulatory treatment. First, I believe that all patients should be put to bed when they are first admitted to a sanatorium. This reduces their activities to a zero line and all procedures can then be determined from this standpoint. Being interested in this topic for several years, I went back over a series of X-ray pictures to see if I could determine from them when to get the patient out of bed and found that it took from six months to a year for the simple absorption of an exudate and also found that this absorption was much facilitated in those patients whom I could persuade to stay in bed. When it is figured that between one and two per cent of the total population of a state are open cases at any given time and that it takes approximately five years to recover from tuberculosis, so we can say beyond a doubt that a party is reasonably cured, and further, that the average length of stay in a sanatorium ranges from a few months to ten months, we can see that most of these cases leave before they have attained any degree of arrestment.

We will all agree that the person with night sweats, temperature, sputum, pleurisy, loss of weight, has active tuberculosis. Some of us will agree that a patient may have none of these and still be classified as semi-active, particularly where there is general tiredness and no gain in weight. So I made a list of the factors which should be considered in determining not only how long a patient should stay in bed, but when to get him out of bed. Take the definitely active case as I have outlined, if the patient is running a temperature, he should stay in bed. He should be in bed regardless of the length of time it takes. The temperature should be taken not only in the middle of the forenoon and the middle of the afternoon, but at 7:00 o'clock in the evening, because frequentiy we find that these persons are running temperature at that time and if just the two former temperatures are taken one would have to assume that the patient is temperature free. I know there is the occasional patient who seems to do somewhat better out of bed, even when he runs a little temperature. Nevertheless I can assure you from personal observation that such a case is a very rare one.

It is common history that the cough lessens when people go to bed until they reach the status of having to cough only when they stir around in the morning or change their position, somewhat like a bronchiectasis, and that subsequent bed rest for this purpose seems to do little good. Sputum is commonly decreased on going to bed and staying in bed, finally attaining the point where a patient has very little sputum or none at all in the morning when he begins to stir around and at night after he goes to bed. I believe there is a definite relation between the amount of sputum raised and the amount of breathing that has to be done. If you consider that the average respiratory rate is from 18 to 20 in the ambulatory case and that it drops from 14 to 16 after the patient goes to bed, you can see the number of respiratory impulses saved in any twenty-four hours.

I believe that night sweats are definite evidence of active toxemia and that practically the only way to overcome them in the early case is to put the patient flat on his back and keep him there, paying attention, of course, to elimination. The ambulatory case with night sweats should go back to bed. Pleurisy is definite evidence of activity and these cases should be in bed. Loss in weight is so frequently encountered early in the disease that it is almost a universal symptom of tuberculosis. Patients who are losing weight, as well as ambulatory patients who cannot maintain their weight, should be in bed. A patient in bed and still losing weight should be examined thoroughly to find out just what factors are caus-

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ing this loss in weight. The standard to shoot at in this case is almost an arbitrary one and yet I feel that we would do well to adopt it. Life insurance companies have long recognized that there is a certain normal weight for each individual, based on sex, age and height, and that pronounced variations from this weight must be accounted for. The standard that I would shoot at would be this normal plus ten pounds in an adult. I expect a little loss in weight when a patient gets up and resumes some activity, but this should not be much, not over three or four pounds at the outside, and should become stationary after the patient has been up for some time.

Tiredness in any degree is also an indication to keep the patient in bed. Blood spitting speaks for itself. A common practice in this regard, I believe, is to put the patient in bed and watch the temperature and pulse particularly. Inside of two weeks, if these do not show any variation, one can assume that there has been no pneumonic complication. The older patient, say over thirty-five, can get up after a hemorrhage sooner than the patient under thirty-five. The fibroid case can get up sooner than one of the exudative type. One thing that I very carefully check is the rate of pulse. Most tuberculosis patients do not die of tuberculosis itself, but they die of cardiac exhaustion. Hence, anything we can do to lessen the pulse rate adds so much to the chance of the patient. A case that has a persistent pulse rate above 90 or 95 at the very high point, should be in bed and should stay in bed until this pulse rate gets considerably less. Pleurisy with effusion, particularly repeated effusion, demands absolute bed rest.

There are many cases that go through a very acute phase and get over their signs of toxemia, both general and local, that can be classified as semi-active. X-ray evidence in some of these cases shows that there has been considerable pneumonic activity in the lung. The physical findings may be very little and yet these patients should stay in bed until the exudate is absorbed. This is particularly true of persons under thirty-five years of age. The person over thirty-five years can in some cases, and very slowly, get out of bed, despite the fact that all the exudate has not been absorbed, but it takes a very close cooperation between the patient and the attending physician to determine this. Some of the semi-active cases do not gain in weight properly, complain of being tired and have a little weakness. I personally believe that they should be in bed.

The general factors are age, as I mentioned before, and the type of lesion. The exudative type should stay in bed very much longer than the fibroid type. The exudative type is a pneumonic process. You may or may not be able to determine whether this is being absorbed by physical examination. One way that I have found very useful is by means of serial X-rays, and where I find an exudative type of lesion, I make it a practice of having it X-rayed at least once every two months. The chronic fibroid type has probably come through the intense tuberculous period and fibroid tissue has replaced the diseased lung tissue. Most of the trouble encountered by such patients is not from the tuberculous process itself, but from the retained secretions in the lung; hence I feel they can get up earlier than they otherwise would.

Homesickness is one of the most undesirable factors that we have to contend with; homesickness and the general morale or lack of morale of the patient. A patient apparently gets along pretty well until the opportunity arises for some of the home people to visit him, and then unless deliberate action is taken, he is very apt to go home. The doctors who in former times used to send their patients west, were unconsciously helping them from the standpoint that they were getting them away from the home people and minimizing the disastrous effects of homesickness. Homesickness in itself does no damage, but as a factor in making the patient go home, it is important and it is one of those things that must be combated in the attempt to keep the patient in bed long enough.

I find that patients surrounded by others who are in bed are very apt to stay in bed because everybody else is doing it. I feel that we are going to accomplish more with prolonged rest in bed if we have patients fairly well isolated among other patients doing the same thing. Again a deliberate attempt must be made to keep up the general morale of the patient. This can be done by the talks of the doctor, a cheerful nurse, placing some kind of a taboo against talking over symptoms with a neighbor, a reasonably cheerful attitude among the staff, sanatorium newspapers and the radio.

The influence of visitors can be seen from the following: I recently came across a situation where the patient had been in bed for a matter of one and one-half months. At that time her husband visited the institution and between them they concocted the idea that she should have more exercise in order to keep up her condition. She had been running a temperature around seven o'clock at night. She had had some decrease in sputum and felt fairly well. Unfortunately her brother-in-law was a doctor in a distant state and also unfortunately he knew very little about tuberculosis. Evidently he had impressed upon her mind that muscles not in use become seriously weakened, not realizing perhaps that it is not only a question of

disused muscles becoming weakened, but also a question of whether or not the normal tonus of those muscles exists. The result was that it came to a showdown as to whether she should go home or be allowed to get up. I personally had nothing to do with the action taken at that time, but I considered it wrong. The patient got up. She was still running a temperature, her pulse was ten points faster, she had some increase in cough and a little increase in sputum. Her weight was about the same as when she went to bed, maybe a few pounds less; her lesion was largely of the exudative type. On admission to the sanitorium, she was twenty-nine years of age. She should have been in bed for months and months, until all of the evidence possible to procure showed that there was absorption of the pneumonic process and I feel that the time is going to come when she will realize, perhaps too late, that her chances are nil because of her action.

In getting patients out of bed, consider these factors: Much can be done by the personal attitude of the doctor. Judge each case on its merits. The more I see of tuberculosis the more I feel that we must utilize the average nine or ten months' period that the patient is in a sanatorium, to accomplish all we can accomplish, not only to hasten the absorption of exudate but to instill in him such habits of living that when he goes home he will have some chance to carry on. I have seen very few become so weak from prolonged bed rest that it was particularly a factor one way or the other.

So in conclusion, let me state that the duration of the bed rest should be determined by the clinical symptoms present, by the type of pathology and by the age of the patient. A deliberate attempt should be made to prove to the patient, as well as his people and the home doctor, that you are acting only in his best interests when you keep him in bed much longer than they think wise. The prolonged bed rest is a very essential thing, and only by encouraging this can we, as sanatorium men, and you as home doctors arrive at a much better result than at the present time.

Discussion

Dr. Edward T. Edgerly, Ottumwa: Mr. President and Members of the Society: I am in the habit of telling patients when they come to our institution that they should forget the calendar. "You don't want to think anything about the Fourth of July or Christmas, or your birthday. You are here to get well, not to be checking up the calendar." The first question they ask you is, "How long do you think I will have to stay here?"

I am no prophet, my father was not a prophet. The tripod of essentials in the treatment of tuberculosis which have established themselves and are recognized by all is good food, fresh air, and plenty of it, and bed rest, all of which are very difficult to evaluate relatively. It is hard to say which is the most important leg of the three-legged stool. In your reading you find there have been all degrees of rest prescribed from typhoid orders up to fifteen miles a day, because they always have to mix bed rest and exercise together.

There are some in the English school who purposely put patients at exercise on the theory that they will produce their own antibodies. That method is not in use very much now. It is better to overdo the resting than underdo it. The outstanding symptoms determining the relations between rest and exercise are bleeding, cough, temperature and pulse, particularly the pulse. If the pulse does not come down the outlook is not good. The cough, as Dr. Taylor said, is reduced by bed rest. I was associated during the late war with our honored President, and he had an order posted in the tuberculosis wards, "No coughing allowed in this ward, under penalty of courtmartial," and it worked, showing what the mind can do in obtaining rest. We might repeat that the less rest you take per minute and the more pulsations of the heart there are made in a minute, the more toxins are carried about and the more rapid is their distribution. Patients are all the time complaining of getting weak in bed, but the inactivity will not produce as much weakness as the toxemia will. The more intense the toxemia the greater the resultant weakness.

I don't know that there is anything more I can add. It is not difficult to restrict the patient who is very ill with 102 and 103 and is perfectly contented and happy to stay in bed, but it is much more difficult to handle the afebrile case who feels good, and our problem is to know just when you may let him up and how you may do it safely. I think letting them up in a chair while the bed is made gives the back muscles a little change. There are patients with whom you must be just as strict as you would with the typhoid, but the getting up allows them to stretch a little and they feel better.

There is such a thing as being over-long in the treatment, and patients do suffer from being hospitalized. They get so they don't want to get up, have no ambition and get over-fat. I think sometimes if you will get them to doing a little work they will firm up and get along more rapidly than after they have been in bed two or three years and get really lazy.

THE ROLE OF SURGERY IN THE TREATMENT OF PULMONARY TUBERCULOSIS*

J. DEWEY BISGARD, M.D., Harlan

Phthisiotherapy of the twentieth century can boast of two most notable advances. The first lies in the field of preventive medicine. The im-

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provement of national hygiene, the eradication of bovine tuberculosis, and the early recognition and isolation of tubercle carriers has, during the past fifteen years, helped to reduce the incidence of pulmonary tuberculosis in the United States from 1,000,000 to 650,000, and the yearly death rate from 155,000 to 85,000, a decrease of nearly 40 per cent.

The advance being made in the surgical management of pulmonary tuberculosis, to quote Dr. John Alexander, "is now offering to a large group of persons with predominantly unilateral tuberculosis an excellent chance to escape a certain death, and to become permanently well. Furthermore, it is offering them an opportunity to earn their livings and to return to their communities without fear of spreading infection."

It is generally agreed among both medical and surgical phthisiotherapists that, with few exceptions, patients with pulmonary tuberculosis should first have an adequate trial of the general hygienic measures of a modern sanitorium regime, or its equivalent in the home. During this period, should careful clinical observation and frequent stereoscopic chest plates indicate a progression of the lesion, or after a reasonable length of time show no improvement or likelihood of arrest, compression therapy should be instituted, providing, of course, that the case is suitable for this form of treatment.

Pulmonary collapse, by whatever means accomplished, assists in effecting a cure by achieving the following results:

1. It provides complete rest of the actively diseased lung, which promotes healing, prevents local extension, and diminishes autotuberculization.
2. It obliterates cavities.
3. It stimulates scar tissue formation, which in turn encapsulates tubercles, ulcers, and cavities, and which restricts lymphatic drainage.
4. It permits complete scar tissue shrinkage, which is essential to encapsulation of tuberculous foci and alleviates symptoms due to excessive mediastinal displacement.
5. It arrests pulmonary hemorrhage, which may assume fatal proportions, which always lowers the patient's resistance, and which frequently carries the disease to uninvolved lung tissue.
6. It benefits remote lesions, both in the respiratory and more removed systems.
7. It often eliminates carriers by quickly freeing the sputum of tubercle bacilli.

The methods which are usually employed to accomplish pulmonary collapse are: artificial pneumothorax, phrenicotomy, extrapleural thoracoplasty, and extrapleural pneumolysis.

Although the subject of artificial pneumothorax is generally considered to lie outside the realm of surgery, its close association to surgical compression makes its omission impossible. It is induced by the introduction of air into the free pleural space, and maintained by frequent "air refills" until the tuberculous process has healed. This usually requires a period of at least two years. In contradistinction to thoracoplasty it is non-deforming and non-shocking, and when complete it produces a complete collapse. In trained hands it is a simple ambulatory procedure with negligible operative risk. Pneumothorax has the advantage over surgical compression that it can be released and the lung re-expanded to resume its function after it has healed, or to meet a crisis such as the activation of tuberculosis or the inception of pneumonia in the contra-lateral lung.

Phrenicotomy and phrenic exeresis are simple, non-shocking procedures. The resulting paralysis of one-half of the diaphragm reduces the lung volume 12 to 30 per cent. This alone is occasionally curative, but usually supplements the collapse obtained by thoracoplasty or artificial pneumothorax.

Posterior thoracoplasty as now generally performed is essentially a Wilms-Sauerbruch operation, with individual modifications. It consists of an extrapleural, paravertebral, subperiosteal resection of long posterior sections of the upper eleven ribs. Following the collapse of the partially deribbed chest wall, the lung volume is reduced 25 to 60 per cent. Occasionally, partial thoracoplasties with resection of the upper or lower five, six, or seven ribs are done, alone or in combination with other procedures.

In a small minority of cases treated by the above described methods it will be found that the collapse has not been sufficient to control or arrest the disease; especially is this true of large, thick walled apical cavities and stiff pneumonic lesions. It then becomes necessary to accomplish further compression by such operations as secondary paravertebral thoracoplasty, parasternal extrapleural thoracoplasty, or complete or partial extrapleural pneumolysis.

Three weeks after a primary thoracoplasty the regeneration of rib segments begins to fix the chest wall in its new position. By resection of this plaque of new bone greater compression can often be obtained.

The parasternal thoracoplasty removes the anterior rib segments, and in conjunction with the posterior operation accomplishes a total cos-

tectomy, and closely approximates a complete collapse of the lung.

The operation of complete or partial extrapleural pneumolysis is used by some authorities in a selected group of cases. It separates the parietal pleura from the chest wall; the compression from the space created is maintained by the interposition of fat, muscle, paraffin, or gauze.

Direct surgical attack and drainage of a large lung cavity is occasionally resorted to when the less hazardous operations enumerated above fail to collapse it completely. Technically this does not differ from surgical drainage of a pyogenic lung abscess.

To obliterate completely a large residual pleural cavity following a tuberculous empyema a modified Shedé thoracoplasty is frequently performed. By this operation the pleura and intercostal structures overlying the cavity, as well as the ribs, are partially removed or turned in to meet the collapsed lung, and in some cases the cavity is filled with pedicle grafts.

In most clinics these operations are done under local infiltration, regional nerve block, spinal or gas anaesthesia, alone or in combination. There has been a growing tendency to divide the operation of complete thoracoplasty into two, three, or more stages. In poor risk cases Dr. Hedblom has carried this division to as many as seven stages, resecting only one or two ribs at a sitting. Obviously this reduces operative shock, and eliminates the danger of mediastinal flutter and other symptoms of cardio-respiratory distress, brought about by the inability to establish physiological readjustment to the sudden collapse of the hemithorax, when deribbed in one stage.

The proper selection of cases for collapse therapy, and the type of compression to be carried out, demands close cooperation between the family physician, the phthisiotherapist, and the surgeon, and a nicety of judgment that grows with clinical experience. The pioneer workers confined this form of treatment to strictly unilateral processes, but experience has broadened the indications, so that most authorities do not hesitate to collapse a lung in the face of moderate involvement in the contra-lateral or, so called, good lung, providing it is healed or localized and quiescent.

In the specific application of compression there exists a wide difference of opinion. Some authorities almost invariably attempt first to procure collapse by artificial pneumothorax. If adhesions prevent a satisfactory collapse it is supplemented in suitable cases by closed pneumolysis, as devised by Jacobeus and modified by Unverrick and Matson. Another group feels that certain cases should receive surgical treatment at the outset, and for this reason divides pulmonary tuberculosis upon a pathological basis into three general classes.

The first class constitutes patients with active exudative lesions, with or without cavity formation, but with ulceration and pneumonic consolidation. They have a low resistance to tuberculosis, as evidenced by a high degree of toxicity, the lack of fibrosis, and the tendency to rapid progression. They are poor operative risks, but fortunately have few and often no pleuritic adhesions to prevent a complete or satisfactory collapse by artificial pneumothorax, which in this group is generally considered the procedure of choice.

At the other extreme is found the chronic fibrotic type, both cavernous and non-cavernous, the so-called good chronics. They are non-toxic, have relatively quiescent lesions, which show a marked tendency toward spontaneous healing, and are therefore good operative risks. Artificial pneumothorax is often impossible on account of obliteration of the free pleural space by adhesions, and if satisfactory collapse is obtained, re-expansion of the contracted lung after it has healed is unlikely, demanding eventually a collapse of the chest wall by thoracoplasty, or eventration of the diaphragm by phrenicotomy. Often the cardio-respiratory distress due to mediastinal displacement, and chest wall fixation by scar tissue contracture demands surgery for relief. This group is best served, therefore, by primary surgical compression.

In the third or middle group the reaction to the invasion of the tubercle bacillus produces a pathological picture that lies between these two extremes. It is generally agreed that artificial pneumothorax should be attempted, and, should it fail, phrenicotomy or thoracoplasty or both should be done.

In brief, thoracoplasty and allied surgical procedures are definitely indicated for those patients who are in good general condition, who have clinically one-sided, chronic, advanced, fibrous, cavernous or non-cavernous tuberculosis, without complications, which has failed to respond to more conservative methods of treatment, and whose prospects of cure or satisfactory improvement are poor without it. A more specific enumeration would be:

1. Chronic unilateral fibrosis phthisis.
2. Failure of artificial pneumothorax to procure a satisfactory collapse, due to adhesions; or its abandonment on account of the development of an empyema or a purulent effusion with adhesive pleuritis.
3. Recurrent effusions and failure of reabsorption.

4. Fixation of the lung in collapsed position, with failure of re-expansion.
5. Infected tuberculous empyema.
6. Excessive displacement of the mediastinum, and chest wall fixation.
7. Control of hemorrhage when induction of artificial pneumothorax fails.

The contra-indications to compression therapy, in general, are: first, active progressive tuberculosis in the good lung, which would advance rapidly if called upon to assume the entire respiratory function; and second, active and extensive extrapulmonary tuberculosis, often found in the intestinal and urinary tracts. The contra-indications to surgical compression in particular are: first, rapidly progressing unilateral processes (in this group the results of artificial pneumothorax are often brilliant, but surgery is poorly tolerated); and second, the contra-indications to major surgery in general.

Tuberculous effusions and their management are divided into three groups:

1. The simple serous effusions rarely demand more than needle aspiration to relieve pressure symptoms.
2. The purulent effusions may be left undisturbed until it becomes obvious that there is no inclination to spontaneous absorption. They should then be evacuated repeatedly by aspiration, with or without air replacement.
3. Empyema—a tuberculous effusion with an associated pyogenic infection may be treated in its milder forms by frequent needle aspirations, but often demands drainage by intercostal thoracotomy by the closed method, or rib resection, as in non-tuberculous empyema.

These methods often fail to dry up both types of purulent effusions, and it becomes necessary to obliterate the cavity, either by combined extrapleural thoracoplasties or a modified Shedé operation. When there has been open drainage the latter procedure is preferable.

The number of cases in which pulmonary disease is sufficiently unilateral to warrant pulmonary compression of one lung has usually been estimated at 10 per cent, or 65,000 cases from a yearly incidence of 650,000. There is considerable ground for the assertion of several observers that there is a large group who, at some earlier stage of their disease, would have been suitable for this form of treatment. Of this 10 per cent, about half of the cases are suitable for, and sufficiently benefited by, artificial pneumothorax to demand no operative interference. In the majority of the remaining half, surgery is indicated.

The late results of a large series of cases reported two or more years after operation indicate that surgical compression has favorably influenced 72 per cent of the patients, has clinically cured 48 per cent, and definitely improved 24 per cent. The remaining 28 per cent were unimproved, or died from their tuberculosis or from causes directly or indirectly connected with operation. The principal causes of death were shock, hemorrhage, cardio-respiratory distress from mediastinal flutter, cardiac failure, wound sepsis, tuberculous and non-tuberculous pneumonia, and (late mortality) progression of tuberculosis in the good lung or remote organs.

Dr. Hedblom recently reported 68 consecutive thoracoplasties, with preliminary phrenicotomy in 28 cases. Fifty-four per cent had demonstrable tuberculous involvement of the good lung. Of this series, 82 per cent were cured or improved, and 3 per cent unimproved, with an early operative mortality of 4.4 per cent, and late mortality of 4.4 per cent.

These results are impressive when one considers that they were obtained upon a group of patients in the far advanced stages of consumption, who had failed to respond to the conservative treatment of sanitorium regime and artificial pneumothorax, and who, without surgical compression, would have had an early death. Surgery was used as a last resort.

From these figures it would appear that there are at the present time in this country approximately 30,000 persons with pulmonary tuberculosis, who present suitable indications for surgery, and who will die of their tuberculosis if not operated upon. About three years ago a questionnaire sent to all surgeons who were known to be engaged in this form of thoracic surgery showed that up to that time less than 400 thoracoplasties had been done in America. Dr. Archibald recently reported that he felt that at the present time well over a thousand had been carried out in this country.

From the substance of this paper, based mainly upon a review of the literature, I am impressed that in the present state of our knowledge, and until a specific remedy for tuberculosis is forthcoming, compression therapy will occupy an increasingly important position in the treatment of pulmonary tuberculosis, and that it behooves all of us to see that suitable cases receive the benefits it provides.

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Discussion

Dr. Frank W. Fordyce, Des Moines: Mr. President and Members of the Iowa State Medical Society: Through the influence of your President I have been privileged to do considerable of this work at Des Moines in the Broadlawns Tuberculosis Hospital, and I want to compliment the essayist upon his excellent review of this subject.

I just simply want to mention a few of the things that have impressed me in the small amount of work that I have done with this disease.

The first thing is the fact that we must have cooperation between the internist and the surgeon and, as Dr. Pepper showed this morning, the bronchoscopist, and it calls for a high degree of teamwork.

The trouble we have in securing patients for this type of work is the fact that the average tuberculous patient is very optimistic. I never heard of one trying to commit suicide. They all think they are going to get well, and by the time they talk it over with all of their relatives and everybody concerned, a great many times the time has passed when a thoracoplasty or phrenicotomy or both could have been of some use. We find that a great many of them ask to have it done. We have had at least several of the patients plead to have the operation when they had far advanced tuberculosis in both lungs. We have used for phrenicotomies, the local anesthesia, making use of the technic described by Alexander with the incision high above the clavicle, infiltrating the nerve with novocain and pulling as much as we can up out of the chest because there are fibers which connect lower down and have some control over the movements of the diaphragm. In the question of thoracoplasty we have usually used gas anesthesia. Of course practically all of these cases have been charity cases, and the different members of the profession in Des Moines, such as Dr. John Connell and Dr. Russell, have been very kind to donate their services in giving the anesthesia. The most satisfactory anesthetic that we have used in this connection has been the new drug which Lilly's are manufacturing. It is called sodium amytal and is not yet on the market.

This particular patient to whom I refer was not a good subject. He had been at Oakdale a long time, had had a tuberculous empyema, had been drained and had a cavity which would not obliterate. He also had a four plus Wassermann. Outside of that he was in good shape. The first two anesthetics were very difficult, even with preliminary use of morphin and hyoscin, but the third one consisted of some of the amytal which Lilly sent out for us to try, and with a very small amount of gas anesthesia this man went through beautifully. We are ordinarily using the three-stage operation, beginning with the upper three ribs, starting with the third and then the second and then the first. The first rib, of course, is the bugbear. You can easily get a brachial plexus injury. It has been done and it is very possible to get an injury to the subclavian vein.

The next time the third, fourth and fifth ribs, and so on down. If you take the first rib last you will find that your patient suffers a great deal of shock because the first rib is the keystone to the arch. By starting at the top and going down the patient will have to stand the least amount of shock possible.

ALLERGY: HAY-FEVER AND ECZEMA*

ZELLA WHITE STEWART, M.D., Iowa City

Of the diseases which can be classified under allergy the discussion of this paper covers but two, hay-fever, seasonal and perennial, and eczema.

History of Hay-Fever. A little more than a hundred years covers the development of our present knowledge of hay-fever, although it is true that as far back as 1565 cases of seasonal catarrh were described. The first report was of a patient who had a dislike of roses, claiming that the odor of roses caused itching of the nose and sneezing. During this hundred years the recognition of the disease as a clinical entity, the presentation of experimental proof of its pollen etiology and the development of a method for its prevention and control have all been achieved. The physicians who contributed to this important knowledge were themselves sufferers from hay-fever.

The first important contributor to the knowledge of the disease was Dr. John Bostock,[1] of Manchester, England, who in 1819 presented a paper on "A Case of Periodical Affection of the Eyes and Chest," before the Royal Medical and Chirurgical Society of London. He described in detail the symptoms of his own disease from which he had suffered since childhood, always at a certain time of the year. He gave it the name of summer catarrh. Bostock did not associate the symptoms with grasses or pollen but thought they were due to exposure to the rays of the sun. A contempo-

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rary, John Elliotson, in a lecture on hay-fever a few years later, stated that the condition was due to grasses and was probably caused by the pollen. Elliotson also described a definite case of hay-fever and asthma due to rabbit emanation.

In 1865 Blackley, who was a sufferer from hay-fever, first proved that the pollen of grasses was responsible for the English type of hay-fever. By making small abrasions in the skin and rubbing in the pollen of plants he first demonstrated the skin's sensitiveness. The pollen etiology of hay-fever, so ably established, was by no means generally accepted either in Europe or the United States, however, for it happened that Blackley's work was published at the time when Koch and Pasteur were publishing the results of their researches in bacteria. Hay-fever began to be considered an infectious disease and the proof of its pollen origin was forgotten. Although the experiments with hay-fever in no way fulfilled the postulates of Koch, the theory that bacteria were the cause of the disease had many adherents.

In 1903, thirty-eight years after Blackley had definitely proved pollen to be the cause, Dunbar demonstrated that the protein constituent of the pollen grain was a toxic agent. In 1911, forty-six years after Blackley's discovery, Noon and Freeman devised the method of preventive treatment of hay-fever which is in general use at the present time.

Prevalence. Hay-fever is widespread throughout the world and in countries where it is comparatively rare it is more a question of botanical conditions than of race. In the United States, the American Indian is apparently less frequently affected than the members of the white race. Various estimates have been made as to its prevalence; a fair statement would be that about one per cent of the people in the United States suffer from hay-fever.

Sectional. Hay-fever as a disease varies markedly as to its etiology, the severity of the symptoms, the date of onset, and the length of attack; these differences depending upon the section of the country in which it is found. The problem of the specialist working in the Mississippi Valley is quite different from that of one working in Texas, Colorado, or California. We find in Colorado that the most important causes of hay-fever are the pollens from Russian thistle, lamb's quarter, western ragweed, and the cottonwood tree; in Oregon, grasses and Russian thistle; in Oklahoma, pigweed, Bermuda grass, western water hemp, and ragweed; in the south, Bermuda grass and Johnson grass. Many of these pollens are not known in this section of the country. In the Mississippi Valley, the sources of pollen in March and April are trees such as oak, maple, cottonwood, and box elder. In June and July the sources are the grasses, such as timothy, red top, and orchard grass, and many flowering plants. Our most severe cases of hay-fever are in August and September. A very careful study has been made of the various plants and weeds pollinating in August to determine which pollen could cause trouble. We know that any pollen, to cause such widespread hay-fever as we have at this time of year, must be very fine, for it must be carried far by the wind in order to affect people miles away from where it grows. As a result of this study of pollens and cases of hay-fever, we know that the weed causing the greater part of the trouble in this section of the country is ragweed, either giant or short. The pollen of ragweed is a light powder and is easily carried by the winds. In experiments made by airships, pollen has been found two miles above the earth's surface. Even in hay-fever resorts, like Duluth, where there is practically no ragweed, if the wind blows from the south for three or four days at a time the hay-fever sufferers may have a return of their symptoms, with relief only when the wind changes. Nowhere in the country does ragweed grow more luxuriantly than in Iowa.

The old idea was that hay-fever was due to goldenrod, goldenglow, and similar weeds. Now we know that the pollen of these plants is relatively coarse and is not carried by the wind. Even people who are sensitive to goldenrod would not be affected except by close contact with the plant.

At the same time it is necessary to make tests for these and many other weeds, such as dandelion, daisy and clover. Often it is a question of a personal investigation in the patient's garden to determine causes other than the common ragweed.

Mr. Y entered the clinic in September, 1923. He had suffered from attacks of asthma in the autumn and throughout the winter for a number of years. He was markedly sensitive to feathers but gave no reaction to pollens. After removing feathers from his home he had no further trouble during 1923 and 1924. On the 20th of August, 1925, he had a severe attack of hay-fever. Retesting with ragweed gave no reaction. On testing him for various flowers found in his garden, marigold was found to be the cause.

Any pollen that gives reaction should be avoided, hence one must find those that would cause trouble only on close contact. The one unavoidable cause of hay-fever, irrespective of close contact, is ragweed, and for this the patient must be desensitized.

The pollen of corn never causes trouble except to people working directly with it, although in testing hay-fever cases, corn frequently gives marked reactions. These patients will often complain of sneezing when preparing corn for cooking or going through corn fields.

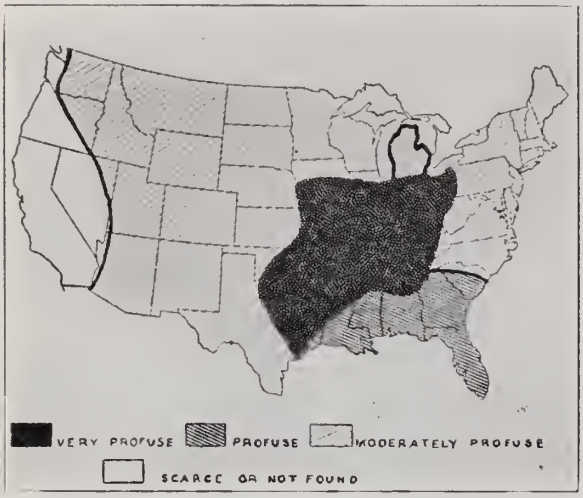


Fig. I. Showing Distribution of Giant Ragweed.

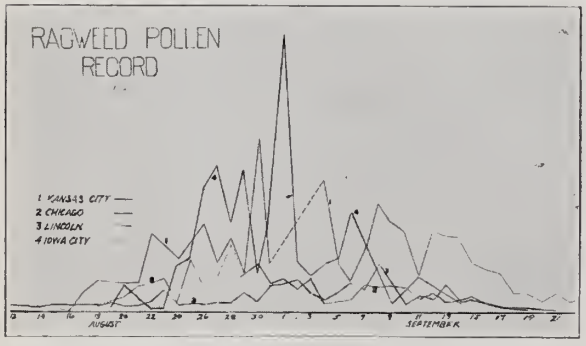


Fig. II. Record of daily pollen count made by Dr. Wm. W. Duke of Kansas City, Dr. Siegfried Maurer of Chicago, Dr. Paul Black of Lincoln, and the author of Iowa City.

A rather unusual and interesting case is the following:

Thelma D., aged three years, came to the clinic in 1925. Since one year of age, she had had frequent attacks of colds, usually ending in asthma. The first attack occurred in December. She lived on a farm. Her age and the time of year of the first attack would seem to exclude pollen as a possible cause. She was given tests covering all possible contacts with animals on the farm, and foods that a child of one year would usually be given. No reactions were found to 130 different tests. It was then decided to repeat all tests and, regardless of her history, to test for pollens. There was a marked reaction to corn pollen. This seemed to be an improbable cause for a child of one year of age, but upon investigation it was found that she spent most of each day in a playroom where the seed corn was kept. The corn was removed from the house and she had no further trouble until the following autumn at corn husking time, when a close contact with her father, whose clothes were covered with pollen, caused a severe attack lasting three days. With proper preventive measures, she has never had another attack.

Even the hay-fever patients who have trouble only during the hay-fever season, are seldom affected by pollen alone. It is very common to find patients extremely sensitive to various foods and to dust from feathers and hair. They seem to have sufficient resistance against these until the hay-fever season, when the burden becomes too heavy and their symptoms are greatly aggravated. All hay-fever cases must be given complete tests for foods and epidermals, as well as for pollen.

Inheritance. Present statistics show that not only is the allergic tendency inherited, but often the hay-fever subject shows a definite inheritance from hay-fever antecedents. On the other hand, the inherited hypersensitiveness is not always specific. The parent may have hay-fever, due to ragweed, while the child may have eczema, due to eating wheat. The earlier in life a person shows sensitiveness, as indicated by symptoms of hay-fever, the greater is the likelihood of his becoming sensitive to more than one group of proteins and of developing other symptoms of allergy. The history of many asthmatic patients is that in early life they had hay-fever over a period of a few weeks at a certain time of the year. As the years went by, to the symptoms of hay-fever, coryza, and sinus trouble, gradually were added bronchitis and asthma. This fact demonstrates the need of paying attention to children who have allergic symptoms. These symptoms may be only frequent attacks of sneezing, cold, and bronchitis, but many complications might be avoided by diagnosis and treatment undertaken early. Balyeat states that about sixty-five per cent of hay-fever sufferers develop asthma.

Treatment. The usual treatment of hay-fever is the preseasonal and coseasonal injection of ragweed solution. It has been customary to start the treatment about three months before the season, gradually increasing the dosage to a point of tolerance and then during the season giving a smaller dosage. Since 1920 I have been starting the treatment of hay-fever any time during the year, with a solution which will give no local reaction, then gradually increasing the strength until the patient's resistance is built up and the maximum dose for that patient has been determined. With all my cases I keep up the treatment throughout the year, giving the maximum injection monthly or bimonthly, over a period of four or five years.

The advantage of treatment throughout the year over the preseasonal treatment is that the tolerance, once established, is maintained from one season to another. In the preseasonal treatment it is completely or partially diminished, necessitating beginning treatment all over again. Since the tolerance never diminishes there is no danger of con-

stitutional reaction. The patients may administer their own treatment.

While the results of pollen therapy as a whole are good, there are cases where there is complete failure or the results are unsatisfactory. Much of this is due to inexperience in this form of therapy and inadequate testing. To obtain results the most important steps are: the careful determination of the species of pollen to be used, early and sufficient treatment of hay-fever cases, the individualizing of the dosage of the pollen and of the interval of treatment according to the patient's reactions, and the determination of all other factors which may aggravate the condition.

Hay-fever patients are handicapped from August 15th, the date of onset of symptoms in this section of the country, until late in September. This is also true with patients under treatment during the first two years. They should avoid unnecessary exposure to ragweed, as far as possible, such as playing golf, taking long rides in the country and traveling by train.

One patient under treatment, who had practically no symptoms during the first two years of treatment, had a severe attack after an airplane trip in the midst of the third season. Avoidance of unnecessary contact is of much importance during the course of treatment. Others, who have finished their treatment covering a period of five years, have no return of symptoms on such contacts.

The cause of failure may be the patient's neglecting treatment and not carrying out instructions fully. Some are discouraged on account of marked local and constitutional reactions, and discontinue treatment. Great care must be taken to avoid this. There is a marked difference in the susceptibility of patients. These reactions are due to too large doses and poor technique in administering them.

Mrs. J., sixty years old, for forty years suffered from severe hay-fever in August. She showed no reactions except to giant ragweed and corn. The first preseasonal treatment in 1920 resulted in only about twenty-five per cent relief. The throughout-the-year treatment was started in November, 1920. During the following year there was seventy-five per cent relief. She has had no symptoms since the fourth year's treatment. During the last five years she has taken no precautions to avoid ragweed and is not conscious of the presence of ragweed pollen in the air. Previous to her treatment she remained in her home for at least three weeks during the hay-fever season, and often was unable to leave her darkened room on account of severe inflammation of the eyes.

Mr. M., forty years of age, had hay-fever for twelve years, followed by asthma. He had reactions to the following: ragweed, corn, alfalfa, daisies, feathers, cauliflower, coffee, cabbage, and beans. Elimination of the various indicated proteins and treatment for ragweed showed more than ninety per cent improvement the first year.

J. B., a boy of nine years, gave a history of colds and bronchitis since two years of age, with hay-fever the last year. He showed marked reaction to ragweed and feathers, but had good results from treatment. During the hay-fever season, after three years of treatment, he had a bad attack of asthma. This was traced to a feather pillow which he had been using while practicing standing on his head.

Miss Y., twenty-three years of age, suffered from severe hay-fever the past six years and also had frequent colds during the year. She had been given preseasonal treatment elsewhere, but without improvement. She had not had complete tests. When these were given she was found sensitive to feathers, beans, peanuts, ginger and orris root. With the treatment for ragweed and elimination of the other factors, her improvement was ninety per cent the first year. During the hot weather in July she complained of a fullness and ringing in the ears and itching of the throat, for which she was being treated by a specialist, but she was not relieved of this distressing condition until she stopped using ginger ale.

Mrs. M., thirty-four years old, gave a history of seasonal hay-fever since four years of age, always followed late in the season by asthma. There was found marked reaction to short ragweed, and the following foods: peaches, cucumbers, beans, onions, and potatoes. The first year's treatment resulted in relief from asthma and shortening of the hay-fever attack to two weeks. She has had no symptoms since the fourth year. She usually takes her vacation in August, motoring through various parts of the country, and remains free from symptoms and irritation. She avoids the foods giving reaction only during the season.

Perennial Hay-fever. Perennial hay-fever is known clinically by a train of symptoms produced by irritation of the respiratory tract. It differs from the seasonal hay-fever in that it is not confined to a certain time of year, it does not come as suddenly, and it does not disappear at the time of heavy frost. The individual suffering from these allergic manifestations complains of almost constant "cold in the head" with frequent attacks of sneezing, coryza, and obstructed nasal breathing with watery discharge which may become purulent. The eyes are seldom irritated as in seasonal hay-fever. The condition is more like an acute coryza which lasts from one to two days, or may be similar to a mild cold, more or less chronic. The symptoms are usually more aggravated during the winter months. Various names have been applied to this: rose cold, vasomotor rhinitis, hyperesthetic rhinitis, atopic coryza, and sinusitis. On examination one finds hypertrophy of the tonsils and adenoids, and masses of lymphoid tissue in the nasopharynx. The nasal mucous membrane is

edematous, and of a grayish appearance. The breathing space is markedly diminished. In the chronic cases there is found more or less hyperplasia of the membrane with the formation of nasal polypi. The sinuses show edema, polypi, and mucoid secretion. The hyperplasia and edema of the sinuses interfere with the blood supply and drainage, making it a good culture medium for bacterial infection. The infectious sinusitis is therefore a secondary result of the allergic condition. The treatment of sinusitis has always called for much discussion among otolaryngologists. Infection has generally been considered the cause. In the last few years allergy as the primary etiologic factor has aroused unusual interest. Dr. L. W. Dean,[2] in a recent article, stresses the fact that all chronic nasal sinus diseases of children should be considered allergic until such possible cause can be excluded. A few years ago he was a strong exponent of infection. Many investigations have been made to discover whether bacteria act as an allergic factor in these cases. No definite proof has ever been offered that they can act as we know epidermals, foods, pollens, and powders do.

Miss Mc C., a nurse, aged thirty-four, complained of more or less cold in her head. She used several handkerchiefs daily. Reactions were to cat fur and feathers. The trouble cleared up entirely upon thorough elimination of the above. She has return of the symptoms on being exposed to the same.

Mr. M., twenty-two years of age, came to the clinic complaining of severe sinus trouble, with almost daily attacks of sneezing, watery nasal discharge, irritation of the eyes without signs of congestion, and obstructed nasal breathing. He had had turbinates removed and sinuses drained. Incomplete tests were made as he was leaving for California. There was marked reaction to feathers, coffee, and silk, with improvement immediately after elimination of the above. While in California he had a severe attack after sleeping on a silk floss pillow. When he returned a year later he was having more trouble. On completing tests, a marked reaction was found to wheat. Since the elimination of wheat he has been absolutely free from any symptoms.

Removal of polypi, tonsils, adenoids, and turbinates gives temporary relief, which would be expected, in view of the etiology. In fact, there is a return of lymphoid hypertrophy as long as the etiologic factors remain undiscovered. Many of these patients give histories of repeated nasal and pharyngial operations.

Duke reports that in a large group of pollen hay-fever patients ten per cent of the cases have nasal polyps and six per cent have sinus infection. He considers this secondary to allergy rather than primary and warns against operations in such cases.

Dr. Morris M. Kahn,[3] of New York, reports a group of ninety-four patients, thirty-three of whom had throat and nose operations. His conclusions were that the condition had not been influenced even in cases of relief of nasal obstruction, and goes on to say, "In my experience the nose and throat should be left alone except where the rhinologic conditions demand attention." Luitz[4] reports a group of fifty-six patients who have had one or more operations on the nose and throat. In only one instance was there relief; in the rest none at all. He is convinced that if the allergy is determined and eliminated from the patient's surroundings, or the patient desensitized, the indications for operative intervention will disappear.

S. S., a boy aged nine years, the son of a physician, gave a history of eczema during his first year. He was treated at the Johns Hopkins Clinic and found sensitive to egg. He later developed a chronic vasomotor rhinitis, daily attacks of sneezing with serious nasal discharge and frequent attacks of asthma, regardless of the fact that he gave a history of inheritance and food allergy since babyhood. He had his tonsils and adenoids removed and his sinuses punctured and irrigated, but with little improvement. Tests showed him sensitive to orris root, feathers and giant ragweed. Removal of orris root and feathers gave immediate relief. After treatment with ragweed he went through the season without trouble.

Dr. T. had asthma since childhood, with severe attacks every few weeks, especially in the winter time. He suffered from a chronic sinus infection, much worse during the winter. The patient had had three nasal operations with only temporary relief. His reactions were to feathers, potatoes, and strawberries. In three weeks of a complete absence of the above, the sinus trouble had cleared up entirely.

All these facts give strong evidence that most of the nose and throat pathology is secondary to the chronic irritation, and disappears when the cause is removed. In all cases the first step is to find the offending proteins. I quote Walker,[5] who says, "No surgery should be done on allergy patients until the protein sensitization has been thoroughly studied and is controlled. Then surgery is indicated for removal of pathological conditions injurious to the general health."

Eczema. Eczema has formerly been defined as "the term commonly applied to any wet or scaly inflammation of the skin, the cause or nature of which the observer does not know." In the past it was considered the external manifestation of some internal disease and was thought in some way to be associated with errors of diet. In 1916 Blackfan first emphasized the allergic character of eczema. Today it is classed with asthma and hay-fever, as due to individual sensitiveness to proteins.

Further evidence of its allergic character is the fact that it is often associated with the late mani-

festations of allergy. A large per cent of adults who suffer from asthma and hay-fever give a history of eczema in childhood.

Eczema is the most common and generally recognized example of protein sensitization in infancy and childhood. It is not as common in adult life, although in a few cases it is carried through or developed late in life. Eczema is usually due to foods used in the daily diet. The most conspicuous example is the protein of egg. Some children are so sensitive to egg protein that a very minute quantity taken internally will produce marked symptoms.

Baby C., a nursing baby, four months of age, showed a patch of eczema on cheeks and behind the ears. The baby gave reaction to egg white. The trouble cleared up and did not return as long as the mother did not include eggs in her diet.

Eczema may also be due to protein sensitization where the conditions are caused by contact, such as with wool, silk, and mohair.

In all allergic diseases, whether hay-fever, asthma, urticaria, eczema, or migraine headaches, the results depend on careful, complete and repeated testing to find the etiologic cause. If reactions are not obtained by the cutaneous method, the more sensitive intradermal tests must be used. The technic of this method should be thoroughly mastered to avoid serious results. There must be a careful investigation of the patient's home and business surroundings, a thorough elimination of all offending proteins, and the desensitization to those proteins impossible to avoid.

I often have patients who tell me they have been to this or that well known clinic and have been tested but that the cause of their trouble has not been found. Usually upon investigation of such a case I find they have been tested with only thirty to sixty proteins. This effort at diagnosis is but a beginning and is indeed unfortunate, for it gives the patient a false sense of security. At the same time such patients are discouraged and think that nothing can be done. I wish to emphasize the fact that the cause can always be found, but the tests must be complete and must be repeated until reactions are obtained. Giving but a few tests, such as sixty, is grossly misleading, for even if something is discovered in the first sixty there may be five more offenders in the remainder. Complete relief depends on complete examination and elimination.

To quote Dr. Vaughan,[6] of Richmond, Virginia: "The role of the allergist is that of a detective. His client has lost something, his health and sense of well-being. He is able to give some clues but it is up to the examiner to ransack the history of the past, even including the experiences of remote ancestors, and to make a most painstaking examination at the site of the loss and throughout the surrounding territory so that he may leave no clue untouched in his effort to return good health to his client. No clue is too insignificant to be carefully studied in orderly arrangement with the other clues. The first battle-cry of the allergist should be, 'the specific allergen is there, somewhere—find it! Where there are several, find the right one.'"

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4. Walker, I. C., Jour. Med. Research, 1917.
5. Vaughan, Warren T., Address before Am. Assoc. Allergy, Minneapolis, June 1, 1928.
6. Dean, L. W., Nasal Sinus Infections in Children; J.A.M.A. 93:838-841, 1929.
7. (Map Figure 1.) Balyeat, Hay Fever and Asthma, p. 85. (By permission of author.)

IS THE OVIDUCT OPEN?

Lawrence D. Smith, M.D., Des Moines

How frequently the medical man is asked by a patient, "Why can't I become pregnant?" The advice frequently offered and the examination frequently made are too often insufficient. These fruitless and blind examinations have led to the very rational and timely procedure of trans-uterine insufflation of CO_2 gas and the instillation of iodized oil, since it is known that reproduction is impossible without an open oviduct and this method is the only practical procedure for the demonstration of oviduct patency. In developing this visualization technic such men as Stein and Ahrens, Plass and Miller, Rubin, Benedict, Sage, Stone, Huhner, Jarcho, Mathieu, King and Moench of this country and Sicard, Forestier and Bèclère of France and Forsdike of London, to whom is accredited the procedure, have devoted much of their time in experimentation and clinical study. Before instituting such procedure, however, we should consider sterility as a bisexual problem; hence we must not confine our study entirely to the female.

The routine used is as follows: A complete history of the woman is taken, especially as pertains to duration of marriage, duration of sterility, contraceptives used, desire for pregnancy, previous pregnancies, frequency of intercourse, age, occupation, and mental attitude, x-ray or radium exposure, previous illnesses (particularly mumps and venereal diseases), operations and type of menstruation.

A complete history of the husband is also taken with the same degree of scrutiny and frankness.

The second step in the procedure is a thorough physical examination of both husband and wife. In the wife special attention is paid to the development of the genitalia, external and internal; the vagina, as to reaction, flora and typography; to the cervix, as to inflammatory lesions and muco-

purulent discharge; to the fundus, as to size, contour and position; to the adnexa and to the glandular system. In the man special attention is paid to the examination of the prostate gland and to the semen by Huhner's test, the technic of which is as follows: The wife is instructed to present herself at the office one hour after coitus and slides are made of material aspirated from the receptaculum seminis and from the endocervical canal and examined separately. The bladder is not to be emptied after coitus until these specimens are obtained. If normal spermatozoa are found we are reasonably sure that the husband is capable of inseminating the cervix and also that the cervical secretions are not particularly hostile to the spermatozoa. If this procedure is not feasible a fresh condom specimen may suffice. The amount, color, odor and consistency of the semen are noted and a careful microscopic examination is made to determine the number of spermatozoa, their morphology, particularly as to length of tails, motility and the presence of any foreign substance such as blood, pus or bacteria. Absence of spermatozoa precludes further testing.

Providing both husband and wife are found to be normal the next step is as follows: The wife is asked to report from four to seven days after regular menstruation,[3] as at that time the endometrium is flat and the uterine ostia of the tubes are less obstructed. This is also the safest time, since examination then will not interfere with possible early pregnancy.[3, 12, 15, 21]. The patient should have prepared herself by taking two drams of compound licorice powder the night before and a light breakfast that morning. After aseptic vaginal preparation she is placed on the table with the knees flexed, the cervix exposed and the vagina swabbed with a two per cent aqueous solution of mercurochrome. The upper lip of the cervix is grasped with a volsella and a uterine sound is introduced to determine the depth and direction of the canal. The patient is warned that the bite of the forcep may cause some distress, as may the introduction of the olive-tipped uterine canula. Determining by a good light that the canula is in place, it is then connected with a Jarcho pressometer, the patient again being warned that she may feel some cramps as one or two c.c. of warm iodized oil is injected. A short pause is allowed for this period of readjustment and under the fluoroscope an attempt is made to observe the filling of the oviducts. In the meantime the injection is continued, and the oil in the patent oviducts is seen to move along in waves, and has occasionally been seen to dart through the fimbria.

Injection is stopped immediately and a picture snapped with a selective diaphragm. The canula is left in place until the picture is developed, and if the picture is satisfactory, the canula is removed; otherwise another picture is taken while it is still in place. In case of non-patency of the oviduct, it is re-rayed within twenty-four hours. The woman is then allowed to lie down thirty minutes or more, thereafter to return home and come again for examination the following day. In no case have we found iodine in the urine following this procedure or any evidence of iodism. In two cases we have had rather severe reactions, one aggravating a latent salpingitis and one increasing markedly the symptoms of hydrosalpinx, which was removed ten days later, with normal convalesence.

This is a permanent record of one's findings and reassuring when shown to the patient. While the x-ray is not infallible, yet it is a far more accurate procedure than any heretofore advanced. Great care should be taken, however, not to offer the patient any such procedure as a panacea for nonfertility and to advise both the man and the woman that it is an almost purely diagnostic measure.

If conception does not take place following this procedure, there may be many obstacles yet in the way, such as sperm immunity, selective fertility, an impenetrable mucous plug in the cervix, dysfunction of such glands as the ovary, thyroid, or pituitary and many other causes which are far beyond the scope of this paper.

Classifications of Sterility.

1. Absolute—where anomalies cannot be over come by treatment.
2. Relative—
   (a) Primary—Where no pregnancy has occurred.
   (b) Secondary—Where pregnancies have occurred.

Facts

1. Up to three months the oviducts are continuous with the uterine cavity. Rubin.[7]
2. Hydrosalpinx is diagnosed by oil droplet formation. Stein.
3. Gas may be more dangerous because there is a possibility of carrying undiluted material over the entire abdomen, even to the diaphragm, while the oil will carry only diluted infective material into the pelvis. Jarcho.[9]
4. Peristalsis is a defensive reaction against the introduction of a foreign substance.
5. Ten to 15 per cent of marriages are sterile. Thirty to 50 per cent of this is due to the male. Forty to 50 per cent is due to closed oviducts in the female.[15-16]
6. Contraceptives inhibit fertility, probably temporarily.

7. The upper limit of oil or gas pressure used is 220 m.m. mercury. Carbon dioxide is the preferable gas to use; amount 1 liter for pneumoperitoneum. (The discussion of pneumoperitoneum is omitted from this paper.

8. The most favorable period of fertility is the middle two weeks between the two menstrual periods. On the grading of 1-2-3-4 of both male and female, a combined fertility of 2 should yield good results.

Cautions

1. Red discoloration of iodized oil indicates decomposition and liberation of iodine. Jarcho.[9]

2. Occasionally the patient feels faint on the introduction of the uterine canula; in this event a smaller amount of oil is injected and if the patient's reaction is unfavorable, the procedure is momentarily delayed, possibly until another time.

3. Re-ray in 24 hours if tubes are occluded.

Therapeutic Value

1. In chronic salpingitis injection of iodized oil (which is 40 per cent iodine and poppy seed oil) may obviate the necessity of an operation. Jarcho.[9]

2. The psychic value on the patient, she realizing that something is being done for her.

3. The author has seen definite improvement in a few cases of chronic salpingitis.

4. By reestablishing the pathway from the external os to the free peritoneal cavity.

5. A mucous plug which at times occupies the deeper portion of the cervical canal is expelled.[25-11]

6. By opening delicate adhesions in the oviduct which might be obstructing the spermatozoa.

Contra-Indications

1. Carelessness and incompetency.
2. Recent uterine bleeding from any cause.
3. Active infection.
4. Recent uterine intervention.
5. Uterine pregnancy.
6. Malignancies or polyps of uterus.
7. Fever.
8. Latent streptococci salpingitis.
9. Iodized oil or insufflation is not to be used where it will in any way change the procedure decided upon.

Summary and Conclusions

The values of trans-uterine instillation of iodized oil with or without CO_2 insufflation may be briefly enumerated as follows:

1. It establishes the patency or non-patency of the oviducts with a permanent visual record.

2. Localizes obstructions.

3. Useful in differentiation of appendicitis from a right-sided salpingitis.

4. Re-checking lost operative records.

5. In case the patient wished offspring, to determine myomectomy instead of hysterectomy if the oviducts were found patent.

6. Pregnancy within the oviduct.[23]

7. No procedure should or can be instituted without knowing the cause of sterility. For example a patient with non-patent oviducts may be given ovarian extract indefinitely and without avail. In a like manner, a patient may be subjected to dilatation and currettment with hospitalization, a procedure which many gynecologists agree is more often the cause than the cure of sterility.

8. Separating delicate adhesions within the oviduct producing at least a temporary fertility. This has occurred too often not to be recorded.

9. By delaying premature pelvic surgery which may be the major cause of unnecessary sterility.

10. Iodized oil and pneumoperitoneum combined yields the maximum information regarding pelvic organs only short of exploratory laparotomy. Stein.

We should not condemn patients to the realm of sterility until we have checked and rechecked our findings, because untold harm may result, even to the disruption of the home through obstinate psychosis and traits that often become darts between man and wife. It is probably better to suggest the adoption of children and hold out some hope for the return of fertility.

May a plea be made, free from all personal prejudices or false pride built up by pet methods of procedure, that we develop an *interpretive quotient,* and, whatever method is used, simple, complex or otherwise, that we forget not the patient, and through practice and comparison, systematize some procedure for his benefit?

Cases

1. July, 1929. Mrs. L. C. D. Sterility seven years. History and physical examination negative. Post-coital examination, 2. Patency test, positive. 120 to 100 m.m. lipiodol 4½ c.c. instilled in uterus. Roentgenogram normal oviducts. Spill R and L. Menstrual period irregular. No pregnancy to date.

2. March, 1930. Mrs. E. B. R. Age 28. Sterility six years. Previous diagnosis fibroids. Physical examination, 1. Post-coital examination satisfactory. Lipiodol with Jarcho Pressometer 78 m.m. 7 c.c. lipiodol instilled in uterus. Roentgenogram arcuate uterus. Spill not definite. November 1, 1930, 10 weeks pregnancy.

3. Mrs. R. C. W. Age 25 years. Sterility four years. History and previous diagnosis ovarian cyst with retroversion. Physical examination unable to outline fundus under gas anesthesia. Post-coital examination, 1. Lipiodol 6½ c.c. 140 m.m. pressure.

Oviducts visualized with spill on second raying. The oviduct sphincters show clearly. Spill L and R. Diagnosis bicornuate uterus.

4. October 20, 1930. Mrs. R. L. Age 32. Sterility ten years. History and physical examination suggestive of appendicitis. Temp. 99. White count 10,000. Post-coital examination, 1. Lipiodol 5 c.c. under fluoroscope, peristalsis in left oviduct only. Roentgenogram, non-patent right oviduct; differentiating it from acute appendicitis.

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College of Medicine
State University of Iowa

(From the Proceedings of the University Hospital Medical Society.)

MOTIVATION IN MEDICAL SYMPTOMATOLOGY

WILLIAM MALAMUD, M.D.

From the Department of Psychiatry

The rapid advance that has been made within recent years in the different branches of medicine and the steady accumulation of new methods of approach in each one of the fields, has not only increased the tendency towards specialization, but has also intensified those difficulties that necessarily accompany the narrowing of interests of the specialist. This fact may escape our notice as long as we remain within the security of the special branch, but we become particularly aware of it as we approach its periphery. The most disconcerting feature of the problem is that these difficulties, far from being rendered less marked by our steady progress, are, on the contrary, intensified by it. For with the increase in knowledge in any special branch the person working in it not only gradually estranges himself from other fields but finds that a similar progress in these fields causes a cropping up of new facts, new methods and new knowledge in these that cannot be efficiently covered by one whose interests are strictly limited to his own specialty. As a result a lack of understanding and interest in the other fields develops and consequent upon this an inability to deal with or even to recognize a problem which is out of the scope of the specialty that one is interested in.

Although this fact is quite clearly recognized anywhere along the lines where the different branches of medicine touch upon one another and in doing so overlap, it would seem that it is particularly evident in that shadowland that lies between the realms of organically and psychically produced symptoms. Whether or not there existed a time in the history of medicine when the practicing physician was as skillful in his dealing with psychogenic symptoms as he was in his treatment of organic disease, we find that at present the two fields are separated by quite a gap. There is no doubt, of course, that at present, with the amount of knowledge that has accumulated in the study of these two fields, certain disease entities have crystallized out which seem to be fairly well differentiated and can only be properly dealt with by specialists in the respective field. Difficulties, however, arise when we begin to approach the boundaries between the two, in other words, con-

ditions where we are dealing with psychic components, concomitants or simulations of organic diseases. Such conditions may be and usually are so vague that the patients afflicted with them may reach the internist or surgeon just as frequently as the neuropsychiatrist and in both cases the difficulties will come up. On such occasions it becomes particularly desirable for the one to know the methods utilized by the other in the approach and treatment of these conditions.

It is not my purpose to go into the question of the almost inevitable psychic concomitants of a great many organic diseases. These are pretty well recognized by physicians practicing medicine. We all know, for instance, the anxiety reactions of cardiac patients, the feelings of guilt and apprehension of the person who knows that he is syphilitic, the emotional instability of the diabetic, the personality changes in the tubercular patient and numerous others. The presence of the disease process, the patient's recognition of this presence and the traditions that through the ages have become attached to these symptom-complexes explain the presence of such factors and they usually progress or regress with the extent of understanding and success of treatment of the given case. Outside of these, however, and approaching nearer to the borderline of purely psychically conditioned diseases, we meet with a number of what one may term psychic superimpositions upon organic disease. In these conditions it is important to realize that we are dealing with a process that is not necessarily related to the organic disease as such but may usually have more or less deeply disguised motivations in the personality of the patient. Three special types of such reactions may be distinguished:

(1) The exaggeration of a symptom in itself actually due to organic disease, or the addition to it of new complaints that cannot be explained by the organic etiology.

(2) The continuation of complaints or of symptoms that at one time had adequate organic background but where the cause is not functioning any more.

(3) The simulation of symptoms that could be caused by organic disease.

Of the three, the third is probably the least important in this connection. Our present-day methods of diagnostic procedure enable us in most cases to recognize simulation, either of the purely conscious or subconscious types with a certain amount of reliability. Occasionally, of course, we make mistakes. But in a large proportion of cases the presence of organic disease can be eliminated and the patient studied from a purely psychiatric point of view. It is different, however, with the first two groups. There, where we are dealing with actual organic disease that has existed at one time or is still present when the patient comes to the physician, the differentiation between psychic and organic and the decision as to what method of treatment is to be adopted may become quite difficult.

It must be admitted that to the internist or surgeon, this problem has been rendered particularly difficult to cope with by the rapid advance that has been made in the field of psychiatry within recent years. So many new and complicated methods for the understanding and treatment of psychogenic diseases have been discovered and brought into use that to the average non-psychiatrist the mere mention of "psychic" brings up the idea of something so extremely intricate and mysterious and so much outside of his limits that he does not even want to start dealing with this symptom. To those, however, who see conditions of this type regularly and take pains to investigate and discover the reasons why the patients behave in the way they do, it has become quite clear that in most cases these reasons after all are not so deeply imbedded that one couldn't by comparatively simple study of the person's life and environment discover the causes and untangle the difficulty, thus removing the psychic superimpositions.

To illustrate this, let us present the following cases:

Case 1. R. G., a married American, white male, aged 28, who comes to this hospital with the complaints that for several years he has been suffering from recurrent depressions. On such occasions he feels discouraged with life, inadequate in his work, life does not seem to hold anything for him and the only way out is to commit suicide. Just before he was brought to the hospital a serious attempt of this type was made by the patient and the relatives brought him in.

Physical examination showed the following positive signs. A somewhat stiff and mask-like facies with a certain degree of seborrhoea, slurred speech and hyper-salivation, a moderate degree of stooping with the head thrust forward, diminution of associated movements of the arms in walking and a slight degree of clumsiness in the movements in general. Otherwise his physical condition was negative. The posture and facies looked so much like those that are met with in the post-encephalitic syndromes that the first investigation was concerned with inquiring after the occurrence of an attack of encephalitis. This proved to be true, the history stating that at the age of 13 this patient had an attack of a febrile disease which at that time and quite probably correctly was diagnosed encephalitis lethargica. With the knowledge that

emotional disturbances, depressive states and obsessive ideas are not uncommon in the post-encephalitic syndromes, the first tendency was to regard this patient's phychic symptoms as due to the actual disease of the central nervous system and because of that regarded as having a very poor prognosis. Upon further study of this patient's personality, a number of factors were elicited that changed our attitude very much. I may add before reporting these facts that they were obtained by a fairly simple method of questioning the patient in detail about his early experiences and his reactions to them, a method which does not require any very specialized technique. The following facts were discovered:

The patient was brought up in a strict religious environment with the only other child, a sister one and one-half years younger than the patient as his only companion. Early in life the patient developed a marked attachment to his mother and dependence upon her. At the same time a feeling of protest developed against the overbearing and strict father. As he grew up he transferred this attachment to his sister and being both by nature and education a somewhat shy and seclusive boy, he spent most of his time with this sister and made very few acquaintances outside. For about two years preceding the attack of encephalitis the two children had come to indulge in a good many sexually colored plays. These culminated in an assault by the patient on his sister. The girl became frightened and threatened to tell the patient's father. This elicited a marked fear reaction on the patient's part. He spent the night dreading punishment which, however, did not materialize. Two days after that the patient fell ill and went through the attack of encephalitis. The onset of this condition was marked by headache, fear, depression, some nausea and general weakness. The usual symptoms of the disease, the sleepiness, eye symptoms and so on followed and the whole process lasted several weeks. Shortly after the onset of this condition, the patient conceived the idea that this was a punishment inflicted upon the patient by God because of his practices with the sister and the final assault. He prayed a good deal and spent most of his time thinking about this. After the recovery from the disease he decided not to have anything to do with girls and to go into the priesthood. At the same time he began the practice of masturbation which was accompanied by phantasies of relations with the sister. This was a constant source of worry to the patient and he feared that the punishment inflicted at one time would recur because of these acts. The further he proceeded the more religious he became and more penitent but kept on practicing the perversion. At the age of 16 it occurred to him that if he would take up associations with the opposite sex that he could stop the habit. But his first attempt at physical contact with the opposite sex was followed by the following type of reaction: Worry and fear the night following the experience and two days later the occurrence of a depression which was marked by the symptoms of anxiety, depression, sick headaches, general weakness and nausea. This lasted for several weeks. At the age of 18 the patient went to college preparatory to taking up the study of priesthood. While there he became acquainted with a girl that looked very much like his sister. He fell in love with her and at first went out a good deal with the girl but not attempting any more intimate associations with her. When this did happen the patient developed an attack similar to the one that he had at the age of 16. This depression was so marked that he had to quit college, come home and take up the carpenter trade in his father's shop.

These depressions repeated themselves on several occasions, always following his attempts at hetero-sexual relationships. In between times the patient practiced masturbation and worried a great deal about it. Three years before his admission to the hospital he met his present wife and fell in love with her. He very studiously avoided having any physical relationships with the girl before marriage. But the relations after marriage resulted in the same attacks of depression that he had experienced before. He went on, however, hoping that in time he would overcome them. But as a matter of fact, as time went on they became more serious.

About one year before admission, the patient's sister became engaged to be married to a friend of the patient's. The announcement of this engagement threw the patient into a frenzy of fear as he thought that the sister would undoubtedly tell her husband about their experiences. The patient's wife had given birth to a child some two or three months before that and upon resumption of sex relations which coincided with the announcement of the engagement of the sister, his depressions became particularly marked and finally culminated in his attempt at suicide.

After a short stay in the hospital and an intensive discussion of these factors with the patient, he cleared up, brightened up and finally was allowed to go home, apparently completely free of his depression. There still remained, of course, the hyper-salivation and the other signs of post-encephalitic syndromes but the depression has disappeared, he is back at work and doing well.

Here then, we are dealing with a combination of an organic syndrome and coincidental psycho-

genic process. It would have been easy enough to attempt to explain the whole thing on the basis of an inflammatory disease of the brain, thus leaving the man in the throes of a psychic conflict which was after all responsible for the most important part of his syndrome.

Case 2. Mrs. M. D., married, white American female, age 39, who came to the clinic with the complaints of pain and weakness in the right hand and forearm. About a year before her coming to the clinic, while working in a shoe factory at a machine, she sustained an injury to the terminal phalanx of the right index finger. The injury was so serious that an amputation of the terminal phalanx was necessary and was performed by the factory surgeon. A certain amount of compensation for the time lost was given to the patient. Two months after the amputation the patient came back to the surgeon stating that she had very marked pain in the stump. The surgeon was afraid that this was due to pressure upon the nerve and unfortunately told the patient so, also that she would have to have the wound opened. This was done, the second phalanx was removed, the nerve dissected and the wound closed.

Some three months later the pain recurred and the whole finger was removed. When she presented herself at the clinic, therefore, she was minus her index finger and now she was having pain in her forearm radiating up into the arm. There were at no time signs of actual nerve injury or catching of the nerve in the tissues. Yet the patient was certain that here, too, the nerve was involved and was talking about the possibility that not only the hand but the whole arm might have to be removed. By this time she had received compensation for the loss of the index finger and during the first interview she was discussing quite naively the possibilities of having to ask for compensation for the whole arm. Here too it was felt at the outset that whether or not at any time during the surgical adventures of this patient there had actually been any involvement of the nerve, at the present there must be other motives behind the pain experienced by the patient. An investigation of the home situation, economic background and life of the patient was undertaken, an investigation that was here, too, conducted on a relatively simple basis and concluded after a short time. The following facts were elicited:

Patient was married four years ago. Up until that time she was working as a practical nurse. The work was not very interesting to her. She had had hopes of some day getting married, having a home and husband who would look after her and provide for her. Unfortunately she married a man who proved to be worthless. Previous to the marriage he had been working in a shoe factory but immediately after that he began to complain of weakness, pains in various parts of the body and inability to go to work. The patient was healthy and capable of working, so that a bargain was concluded, the husband staying at home looking after the house and the patient going to work in the shoe factory. Needless to say, the bargain was not satisfactory to the patient. The work in the factory was hard, colorless, uninteresting; conditions at home with a sick, neurotic husband were less satisfactory.

About that time, as usually happens in factories of this type, several accidents occurred, in some of the cases quite a good deal of compensation being paid out. Patient began to ruminate about compensation, became very much interested in the question and did a great deal of studying of it. It was at that time that the accident occurred. When the subject of compensation was first brought up to her it immediately awakened all of her ruminations and phantasies of an easy life, of being at home, receiving compensation, not having to work, etc. The series of amputations have helped to increase the possibility of finally obtaining such compensation and when she came to the clinic she had figured out that the loss of an arm would give her enough to be able to live on the rest of her life. A discussion of this subject with the patient brought the realization by the patient of what she was actually heading for, and a certain amount of serious lecturing to the husband, brought him up to the realization of *his* duties. Further surgical interference became unnecessary and both patient and her husband made a better adjustment.

These two cases then are representative of the first two groups of psychic superimpositions upon actual organic conditions. It can be seen quite clearly that in a great many of the cases the psychically conditioned symptoms may supersede and overshadow the organic ones both in degree and importance. In a good many cases, however, the psychic factors may only be responsible for a minor part of the symptoms. But whatever the extent may be to which the psychically conditioned symptoms incapacitate the patient, the situation can be dealt with much better after these superimpositions are cleared away. It must be remembered, too, that in most cases the psychogenic background is not even as complicated as in the cases we have just given. Usually good common-sense and insistent probing will bring these factors to the surface and will help the physician not only in clearing away such of the symptoms that are due to psychic factors, but also in being able to deal much more efficiently with those symptoms that are actually due to the organic disease.

A CASE OF GONOCOCCAL PYELONEPHROSIS

H. P. LEE, M.D.
From the Department of Urology

Gonococcal infections of the kidney are extremely rare. Birkhaug and Parlow,[1] summarized all the cases in the literature and found only thirty-two, to which they added one case. Because of this rareness, the following case is of interest:

M. W., a white male, 20 years of age, was admitted to the University Hospital, September 24, 1930, with the following history: In 1927 he suddenly developed dull aching pain in the lower right chest and right kidney region which did not radiate, but was aggravated by deep breathing. There were no urinary symptoms, chills or fever, and his physician, stating that he believed the patient had strained a muscle, taped the right side, which gave complete relief in about three or four days. In the fall of 1929, eight days after exposure, the patient developed an urethral discharge which he treated himself by urethral injections of silvol, the discharge persisting more or less until January, 1930, when it disappeared entirely. About August 1, 1930, three days following exposure, he again developed an urethral discharge which he again treated himself with silvol injections and by August 20th the discharge had apparently subsided. August 21st, while loading telegraph poles, he developed sudden sharp pain in the right side and back, exactly like the pain he had experienced in 1927. It was quite severe, aggravated by deep breathing, and his physician again strapped the side, but this gave relief for only a day or two when the pain became so severe that he had to go to bed. At this time he noticed that his urine was very cloudy and he also noted that at times he voided very little urine and at other times he voided large amounts, all of the urine being milky in its appearance. During the first few days following his going to bed he had several light chills and some fever, then he had profuse night sweats and began to have afternoon fever of 100 to 102 degrees, which continued up to the time of his entrance to the hospital. About September 20, x-ray plates of the urinary tract showed what was taken to be a stone in the right kidney, but on repeating the pictures, no stone was seen. The pain, pyuria and other symptoms continued. He had lost about twenty-five pounds' weight. His home physician sent him into the hospital with a diagnosis of "abscessed kidney," but he was taken into the Medical Service because of his history of pain in the right lower chest posteriorly, aggravated by deep breathing, the fever, and the findings on physical examination. The large amount of pus in the urine was disregarded at the time of admission because of the history of urethral discharge, which at the time of admission was quite active and smears of the discharge showed intracellular and extracellular diplococci. While his symptoms were referable to his lower chest, he had had no cough or sputum during his illness and he had no past history of hemoptysis, cough, dyspnoea or sputum. He appeared very ill. His temperature was 101, pulse 80, respiration 20. Weight 148 pounds. Mental state normal. Head and neck normal. Expansion was limited in the lower right thorax anteriorly and posteriorly. There was dullness to percussion on the right side of the chest below the nipple, with increase in pitch. Breath sounds were suppressed over the area of dullness, with some evidence of moisture above the dullness. The apices were clear. Whispered voice was well transmitted in a small area posteriorly. Tactile fremitus was normally present everywhere except over the area of dullness. The heart was normal in size and mechanism. Blood pressure 130/75. The pulse was quick and regular. The abdomen was of normal contour, with a well healed appendectomy scar. The inguinal glands were somewhat enlarged and tender and the recti muscles somewhat rigid, more on the right than on the left. There was some tenderness in the right costovertebral angle and some rigidity of the muscles of the right back. The extremities and reflexes were normal. The blood showed a hemaglobin of 90 per cent, red cells 4,650,000 leucocytes 11750. The differential count was normal, and the red cells were normal in staining. The specific gravity of the urine was 1003, reaction acid, cloudy with pus, a trace of albumin, and no sugar or blood. Stereo x-rays of the chest showed an increase in the hilum shadows in both sides, with an accentuation of the lung markings. The left lung field was essentially clear. The right lung field was essentially clear down to the level of the third interspace anteriorly. From here to the base there was considerable clouding and at the extreme base there was complete obscuration of the lung markings. There was moderate pleural thickening along the right lateral chest wall. The findings were stated to be those of thickened pleura, involving mainly the right base, extending up over the chest on the right side and into the mediastinum, with probably a small amount of fluid.

The patient continued to pass large amounts of pus in the urine daily. On September 27, smears

[1] Birkhaug & Parlow, Gonoccal infection of the kidney, J. Urol., July, 1928, xx 83-95.

of the pus were negative for acid-fast organisms, but the Gram stain showed many Gram negative diplococci both intra and extracellular. On September 27, an x-ray of the entire urinary tract was taken. The radiologist reported: "Neither kidney very definitely visualized, particularly the right side, where there is some obliteration of the lower pole and of the psoas muscle shadow. The possibility of perinephritic abscess should be considered, however this is not definite, due to the large amount of gas and fecal material in the gastro-intestinal tract." On October 2, a two glass urine test showed three-fourths the volume of the first glass to be pus, and one-fourth the second glass. The Urological Service was asked



Pyelogram showing deformity and destruction of the right kidney pelvis.

to see the patient on this date, at which time the two glass test was noted. The Medical resident and I both suggested the possibility of a gonorrhoeal infection of the kidney, but because of the rarity of such a lesion, discarded the possibility. Because of the urethral discharge which had shown gonococci, we did not wish to pass any instruments through the urethra and therefore gave him 40 grams of uroselectan intravenously in an endeavor to obtain pyelograms that might be of value. These x-rays showed partial filling of the left kidney pelvis, no filling of the right pelvis, and obliteration of the right kidney and psoas muscle shadows, suggesting a perinephritic abscess with a non-functioning kidney. However, as this did not give a definite diagnosis, on October 4th cystoscopy was done under sacral anesthesia. There was a small amount of very purulent urine in the bladder, but the bladder mucosa was surprisingly normal, there being only very slight generalized reddening of the mucosa—much less than one would expect in a bladder containing such very purulent urine. The left ureteral orifice was normal in position and appearance and clear urine could be seen coming from it with each ureteral peristalsis. The right orifice, while normal in position, was slightly reddened, and with each ureteral peristalsis thick white pus was extruded from the orifice looking very much like tooth paste being squeezed from a tube. A No. 8 catheter was introduced up the right ureter, but the pus was so thick that it could not be aspirated through even this large catheter, and neither could it be thinned by injecting sterile water into the ureter, and it was impossible to obtain pus for examination or culture. The left kidney pelvis, while larger than is usually found, was apparently normal. At the uretero-pelvic junction there is a notch in the ureter, suggesting the presence of an anomalous vessel. The psoas muscle on the left is well outlined. Pyelograms done on the right kidney pelvis, after injection of 40 cc of 12.5 per cent sodium iodide solution, show a large, irregular area of opacity, evidently a partially filled enormous pyonephrosis. Again the psoas muscle and kidney shadows are obliterated, and in the ureter, at the uretero-pelvic junction is a notch suggesting an anomalous blood vessel. Phthalein, given intravenously, appeared from the left kidney in five minutes and in 15 minutes the left kidney secreted 21.7 per cent, while the dye appeared in 13 minutes from the right kidney and after 25 minutes only a trace of color had been secreted.

A diagnosis of right pyonephrosis was made, and because of the suggestion of an anomalous vessel, at the uretero-pelvic junction, it was felt that this was probably a case of hydronephrosis due to aberrant vessels, with a secondary infection in the hydronephrosis. Nephrectomy was advised and was done on October 8th, through the usual right curved oblique lumbar incision. The kidney was very large and tense with pus, and the upper pole extended upward, pushing up the diaphragm and accounting for the findings in the lower right chest. In order to remove the kidney, it was necessary to empty it of pus, approximately a liter of thick, white odorless pus being evacuated through a stab wound. The ureter was found twisted upward and downward in several acute turns, being held in this position by dense scar tissue surrounding it, and at the uretero-pelvic junc-

tion there was a large anomalous vessel running obliquely across the ureter anteriorly and going to the lower pole of the kidney. The kidney was removed without difficulty and the patient made a fairly uneventful recovery with the exception that the wound was very slow in healing and drained enormous quantities of pus for almost a month. The findings at operation, we felt, substantiated our preoperative diagnosis of congenital hydronephrosis which had become infected and not until we received the report of the pathologist did we change our diagnosis to gonococcal infection.

The pathologist reported as follows: "Specimen consists of one right kidney weighing 570 grams. On longitudinal section it measures 17x15 cms. There are scattered throughout cystic cavities filled with seropurulent fluid. All of the cavities connect with the pelvis. No obstruction of the ureter is noted. The peripheral cavities are lined with a whitish yellow, somewhat strand-like tissue. The pelvis is lined with a hemorrhagic, somewhat granular tissue. In the intervening spaces between the cyst cavities, kidney substance is practically all destroyed. There are numerous small abscesses present. The external surface over the cavities is hemorrhagic and there are small minute hemorrhages appearing in the rest of the kidney surface. There is marked inflammation of the perirenal tissues and they are firmly adherent to the kidney. On tearing this tissue away numerous miliary abscesses are encountered. Gross diagnosis: Infected hydronephrosis. Microscopic description: Sections of the kidney show that the tissue is destroyed for the most part by a severe inflammatory process. Evidence of old inflammation is present, such as the presence of scarring, granulation tissue, plasma cells and eosinophiles also. Very few normal glomeruli are seen, the majority showing some degree of fibrosis. The sections are stained with both Giemsa and Eosin-Methylene-blue. Diplococci are present in large endothelial cells in the abscess areas. The kidney was cultured for gonococci and other organisms and no growth was obtained. With the finding of diplococci in the section, the diagnosis of a gonococcal infection is presumed even though a culture was not obtained. Diagnosis: Gonococcal pyelonephrosis."

Summary: There is presented a case of gonococcal infection of the right kidney which was overlooked because such an infection was discounted due to the extreme rareness of the condition.

DR. LOWELL DIES IN WASHINGTON

Dr. Paul M. Lowell, Senior Medical Officer, Food and Drug Administration, U. S. Department of Agriculture, died January 3, 1931, at Walter Reed Hospital, of pneumonia. While connected with the Food and Drug Administration, Doctor Lowell was in charge of preparation of court cases based upon false and fraudulent therapeutic claims for drugs and medicines. He planned work for the field staff in reference to medicinal claims for drug products entering into interstate commerce. He assisted in conducting hearings of such cases and served as an expert medical witness when medical cases involving violation of the food and drugs act were being tried.

PRIZE AWARD OF THE AMERICAN ASSOCIATION FOR THE STUDY OF GOITER

The American Association for the Study of Goiter again offers an award of three hundred dollars ($300.00) for the best essay based upon original research work on any phase of goiter presented at their annual meeting in Kansas City, Mo., April 7, 8 and 9, 1931. It is hoped this offer will stimulate valuable research work, especially in regard to the basic cause of goiter.

Competing manuscripts must be in the hands of the Corresponding Secretary, J. R. Yung, M.D., Terre Haute, not later than April 1, 1931, to permit the award committee sufficient time to examine all data. Manuscripts arriving after this date will be held for the next year or returned at the author's request.

DR. AND MRS. D. W. SMOUSE HONORED BY DES MOINES

Announcement was made on January 27th of the award "for greatest service to the community" to Dr. and Mrs. D. W. Smouse, formerly of Des Moines and now residing in Pasadena, California. This award is made annually to that citizen of Des Moines who has rendered the city the most outstanding service and is commemorated by the presentation of a loving cup furnished by the *Des Moines Tribune-Capital.*

As previously announced in the JOURNAL, Dr. and Mrs. Smouse gave $333,000 for the erection and equipment of a special school to be operated under the Des Moines public school supervision for the physically handicapped children of our city. This school is now near completion and will be ready for occupancy by February 23rd, and notices have already been sent to Des Moines physicians requesting recommendations for admission to the school. It is intended that the school shall serve children who are physically handicapped, blind, deaf, anemic and those with cardiac diseases. Speech impediment will also receive attention. Dr. Smouse practiced general medicine and surgery in Des Moines during most of his active years in practice and was at all times definitely affiliated with both his county and state organizations, having served each in an official capacity.

The honor conferred upon Dr. Smouse in this present community award reflects honor both upon Dr. Smouse himself and the profession of Iowa of which he was so long a distinguished member.

State Health Commissioner's Page

D. C. Sturlamark, M.D.

The most prevalent diseases for December were chickenpox, scarlet fever, smallpox, diphtheria, whooping cough and mumps in the order given.

CHICKENPOX

Chickenpox increased from 341 cases for November to 449 cases for December. The incidence of this disease is the greatest of any year since 1924. The 2,252 cases for 1930 represent an increase of 1,603 cases over the 649 for 1924, and an increase of 258 cases over the 1,994 cases for 1929.

SCARLET FEVER

There was an increase of 82 cases over the figures for November (338 and 256, respectively). For the year 1930, the incidence of reported cases was 2,836 compared with 4,315 for 1929, a reduction of 1,479 cases or 34 per cent.

SMALLPOX

There was an increase in this disease of 61 cases over the figures for November (106 and 45) but a decided decrease from the figures for December, 1929 (106 and 440). However, the large number of cases reported during the first six months of 1930 (2,588) had its effect upon the total of 3,044 cases reported for the year. This number is 1,131 more than that for any year since 1924. The number of cases of smallpox has increased steadily since 1925, the number of cases reported each year from 1925 to 1930 inclusive are 645, 1,131, 1,279, 1,894, 1,913, 3,044. What is the reason for this continuous increase? Are not the doctors vaccinating or has the usefulness of vaccine been lost?

DIPHTHERIA

For the months of January, November and December, 1930, an equal number of cases of diphtheria was reported (55). October had 44 cases. Of these 44 cases 18 or 40 per cent were reported from one city. Of the 55 cases reported in November, seven or 12.7 per cent were reported from the same city. The explanation of the health officer was that there was an outbreak among the Poles, who had refused to have their children immunized at the time the city put on its campaign and that no medical attention was secured for the early cases, hence he was ignorant of the condition until the outbreak was well under way. In spite of this increase, however, there were only 16 cases more in 1930 than in 1929. Returns for 11 months indicate that the deaths from this disease will not exceed the 47 (corrected figure) for 1929.

POLIOMYELITIS

A total of 222 cases of this disease was reported for the year. This is a marked increase over the figure for 1925 (176) which is the next highest year since 1924.

For further comment upon the outbreak which Iowa experienced in common with other states reference is made to an article on Poliomyelitis in Iowa, 1930, elsewhere in the Journal.

TYPHOID FEVER

There were no large outbreaks of this disease such as marred the typhoid record of 1929. One hundred six cases were reported which is only three more than those for the lowest year in the history of the state (1924) and is a reduction of 182 cases from the 288 reported for 1929.

FIELD TRIPS

Three trips were made by the epidemiologist: one for diphtheria, one for scarlet fever and one for smallpox.

The JOURNAL of the Iowa State Medical Society

ISSUED MONTHLY

RALPH R. SIMMONS, Editor.....Des Moines

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THE PAPAL ENCYCLICAL ON MARRIAGE

"Myself when young did eagerly frequent
Doctor and Saint, and heard great argument,
But ever more came out the same door wherein
I went."

THE RUBAIYAT.

Every thoughtful citizen will find much of interest in the recent official expression of the Roman Catholic Church on the problems of marriage and marriage relationships. Many of the problems discussed are those having definite and practical bearing upon public and personal health and for this reason will be of especial interest to physicians. The medical profession has attempted to solve these problems of the marital state upon a basis of medical science but, since the patients' viewpoint must be considered and this viewpoint is frequently developed by church relationships, the physician, then, must take cognizance of ecclesiastical precept.

During the second week in January His Holiness Pope Pius XI, "As Christ's vicar upon earth and supreme shepherd and teacher" issued a sixteen-thousand-word encyclical dealing with the holiness of the Christian marriage and stressing in no uncertain terms the moral laxness which was too frequently attendant upon the marital state. He defined marriage as a union primarily for propagation and education of children, a pact of mutual faith and honor, an inviolable, indissoluble sacrament between its partners. He was direct and uncompromising in his pronouncement against divorce, experimental or trial marriage, sterilization, birth control and abortion. To those unfamiliar with the teachings of the Roman Catholic Church the attitude of the Pope in these matters might appear extreme and in some respects unfitting for the times. The Reverend John Haynes Holmes of The Manhattan Community Church expressed such a thought in his comment on the encyclical which is quoted: "Here is a tenth-century mind at work on a twentieth-century problem. We are never going to get anywhere with marriage or with anything else by going back to St. Augustine." In refutation of such a view, however, His Holiness states his pronouncements not as laws of the church subject to modes and customs but inimitable divine laws as eternal as the universe. Indicative of his attitude in this regard and pronouncing against birth control, he states: "Any use whatsoever of matrimony exercised in such a way that the act is deliberately frustrated in its natural power to generate life is an offense against the laws of God and of nature, and those who indulge in such are branded with the guilt of a grave sin. Small wonder, therefore, if holy writ bears witness that the Divine Majesty regards with greatest detestation this horrible crime, and at times has punished it with death."

Contrast with such a view that openly declared by the New York East Methodist Conference who are reported to have approved a committee report which stated in part: "In the interest of morality and sound scientific knowledge, we favor such changes of the law in the State of New York and Connecticut as will remove the existing restrictions upon the communication by physicians to their patients of important medical information on birth control." Current news reports would indicate that a position of advocacy for or tolerance of birth control had received sponsorship by official bodies of the Church of England, the Methodist Episcopal Church, the Central Conference of American Rabbis, the Congregational Church of Connecticut, the Universalist General Convention and the American Unitarian Association.

The papal pronouncement against abortion was equally unyielding and in no way indicated that the Church could or would modify their tenets to conform with those accepted by medical authority in the majority of instances, namely, that abortion as a therapeutic measure in the saving of maternal life was not only justifiable but demanded. He states: "However much we may pity the mother whose health and even life is gravely imperiled in the performance of the duty allotted to her by nature, nevertheless what could ever be a sufficient reason for excusing in any way the direct murder of the innocent? This is precisely what we are dealing with here. Whether inflicted upon the mother or upon the child it is against the precept of God and the laws of nature: 'Thou shalt not kill;' the life of each is equally sacred, and no one

has the power, not even the public authority, to destroy it."

Contrast with this inflexible attitude the statement of Joseph B. DeLee, eminent obstetrician, who in his textbook indicates nine definite indications for therapeutic abortion and states: "The moral and religious aspects of the case must be considered, never forgetting that in those cases where disease in pregnancy threatens the life of the mother, the induction of abortion is a conservative operation, 'saving the mother,' not 'sacrificing the child,' because, as Pinard says, the mother would otherwise become the 'coffin' of the child."

While medical science has favored and advocated laws permitting (Iowa Statute) or demanding sterilization for certain classes of mentally, morally and physically unfit persons, we find the attitude of the Church positive in its condemnation of sterilizaton on such a basis. "Public magistrates have no direct power over the bodies of their subjects; therefore, where no crime has taken place and there is no cause present for grave punishment, they can never directly harm or tamper with the integrity of the body, either for the reasons of eugenics or for any other reason."

Upon good authority, it is asserted that this pronouncement on sterilization is the first and only authoritative and official statement on this problem which has ever been made by the head of the Catholic church.

FIFTEENTH ANNUAL CLINICAL SESSION of the AMERICAN COLLEGE OF PHYSICIANS

The Fifteenth Annual Clinical Session of the American College of Physicians will convene in Baltimore, Maryland, March 23-27, and in Washington, D. C., March 28, 1931. The organization holds this session in Baltimore through the cordial invitation of the Johns Hopkins University School of Medicine, the University of Maryland School of Medicine, the Medical and Chirurgical Faculty of the State of Maryland, the Baltimore City Medical Society, and the further cooperative interest manifested by the various Baltimore hospitals and civic societies. Held in important medical centers, these clinical sessions constitute a most important postgraduate week in internal medicine each year. Those who attend the meeting will find ample in the way of clinical, laboratory, research and historical interest, to repay them for the time spent in making the journey. Dr. Sydney R. Miller, of Baltimore, president of the American College of Physicians, has prepared the program for the General Scientific Sessions, while Dr. Maurice C. Pincoffs, general chairman, also of Baltimore, has arranged the program of clinics, demonstrations, entertainment, etc.

As an added feature of the Clinical Session this year, an additional day, March 28, will be spent in Washington, D. C., where a special program of clinics and inspection tours has been arranged under the auspices of the Medical Departments of the U. S. Army, U. S. Navy, U. S. Public Health Service and Georgetown University. Dr. William Gerry Morgan is acting as chairman of the Washington committee.

On the General Scientific Programs there will be forty-five or fifty selected formal papers. Symposia on blood diseases, oxygen therapy, diseases of the liver, recent advances in endocrinology with particular reference to the newer work on suprarenal extracts, myocarditis, and on several other subjects have been arranged. At Baltimore's many modern and excellently operated hospitals, clinics, ward-walks, laboratory demonstrations and the like will be held. Johns Hopkins Hospital and Medical School, under Dr. Alan M. Chesney, Dean and a specially appointed committee, will place at the disposal of the college all of its facilities and offer a program of great interest. Additional hospitals, such as the Union Memorial Hospital, St. Agnes Hospital, at which Dr. Joseph C. Bloodgood does so much of his work, the Municipal Hospitals, and several of the more private institutions, such as the Howard A. Kelly Hospital, noted particularly for its radium activities, and the Sheppard and Enoch Pratt Hospital, which is one of the most modern dealing with psychiatric problems, and many others will provide programs of clinics.

Mr. E. R. Loveland, 133-135 S. 36th Street, Philadelphia, is the executive secretary of the college, and it is to him that requests for further information or programs should be addressed.

THE PROBLEM OF VENEREAL DISEASE

In a survey conducted by the United States Public Health Service and reported by T. Parran, Jr.* and L. J. Usilton, they determined in spite of the attention devoted to the problem during the last few years, the incidence is still alarmingly great. Their survey was made in selected communities involving a population of over 17 million, in which there were 20 thousand physicians and 940 clinics. On a basis of a survey over this area they figured there were nearly 650 thousand active cases of syphilis and nearly 500 thousand cases of gonorrhea constantly under medical care in the United States. Their estimate indicates the incidence for gonorrhea is 4.88 for males and 1.78 for females. For syphilis the returns given are 4.77

* Amer. Journ. of Syphilis, April, 1930.

for males and 3.08 for females. They have determined the peak age group for both diseases is between 20 and 25 years.

It is interesting to note that in the navy the official venereal disease rate is given at 13.23 per cent and in the army 4.97 per cent. Since the rate indicated for the army is but slightly higher than that for the population at large, while that for the navy is nearly three times as great, it is safe to presume that other factors are significant in the latter group. In the second million men drafted during the World War casual clinical examination revealed a venereal incidence rate of 5.67 per cent.

From the standpoint of morbidity it is interesting to note that on a basis of this survey they have considered that the number of noneffective days lost through venereal disease by the general male population between the ages of 15 and 45 would approximate 21 million days per year.

On a basis of the territorial survey they estimated that approximately 31 per cent of the total number of venereal cases now under treatment, are being treated at public expense.

THE WOMAN'S AUXILIARY TO THE A. M. A.

I. THE EASTERN DISTRICT

New Hampshire stands alone as the only New England state 100 per cent organized and cooperating with the National Organization. Last year the state auxiliary had misgivings as to its necessity and usefulness but an urgent request from the medical society that the women remain organized, dispelled all doubts. During the year following, Mrs. Hubbard, wife of the state president, visited every county which encouraged and stimulated the growth of unit auxiliaries.

The New Jersey Auxiliary made pilgrimages to state institutions, set apart one meeting when the mothers of physicians were entertained, and sponsored various health meetings. The Essex County Auxiliary, assisted by the physicians, succeeded in establishing a course of health talks, in cooperation with the Y. W. C. A. of Newark, emphasizing especially prenatal care and information which would aid the mothers of babies and young children. Last year Mrs. James Hunter, Jr., New Jersey's state president, visited every county as did Mrs. Walter Jackson Freeman in Pennsylvania, during her presidency. One cannot help drawing the conclusion that personal contacts are necessary for county development and success.

Virginia is active in spots. The doctors encourage the auxiliaries as they believe that through them education with regard to the menace of state medicine can be spread.

Ohio for several years has been sending representatives from a few organized counties to the national meetings but as yet there is no state organization. As our friend and adviser, Dr. Upham, lives in Ohio, it is felt that he will advise the National Auxiliary when the auspicious time arrives for the establishment of a state auxiliary.

The District of Columbia seems so completely diverted with Washington affairs that the auxiliary which so capably cared for the A. M. A. meetings some years back seems to have gone into retirement.

Delaware in a breathless, better-late-than-never manner, has completely caught up and is most interested and active and has entered upon serious work by assisting the men of the profession in establishing a medical library in Wilmington. They will cooperate with Philadelphia at the time of the A. M. A. meeting and the eastern section will introduce them with pride to the National Organization. West Virginia is up and doing and you may expect still better things from that state this year.

Maine, Massachusetts, Rhode Island, Vermont and Maryland have reported the interest of individuals but no organized effort. Queries from different localities in New York as to why there is no auxiliary have been answered with the statement that several years ago the House of Delegates voted unanimously in favor of the auxiliary and authorized its organization. The same year Connecticut voted favorably but no definite steps have been taken.

Pennsylvania has surely discovered the rhythm in which its auxiliary work is best done, for concrete accomplishments have been turned out regularly, year by year. Of the three thousand dollars contributed last year to the Medical Benevolence Fund more than two-thirds was contributed by the auxiliary. A definite trend toward educational meetings is felt all over the state and socially it is hoped that the carefully formed Philadelphia plans for the next meeting will bring honor and glory to the Keystone state. Not only are the adult members of the auxiliary meeting but a group of the most charming and good looking daughters of doctors are working together in order that they may know each other and work in unison for the comfort and pleasure of the A. M. A. guests when they come to Philadelphia in May. Verily, who can question the wisdom of the auxiliary, when it brings about so much willing work in behalf of the medical men of the country?

Editor's Note: This is the first of a series of four articles to be presented by the committee on publicity of the Woman's Auxiliary giving a general survey of their organizational work. The next installment will appear in the March issue of the Journal.

JOINT MEETING OF HEALTH ASSOCIATIONS

Of special interest to Iowa physicians will be the program of the annual meeting of the Iowa Tuberculosis Association, the Iowa Heart Association and the Iowa Sanatorium Association to be held jointly at the Hotel Fort Des Moines, in this city, Thursday and Friday, February 26 and 27.

On Wednesday evening the 25th, the Polk County Medical Society will meet at the Fort Des Moines Hotel and will be addressed by Dr. I. C. Riggin, executive secretary of the American Heart Association, New York, on the subject of Rheumatic Heart Disease in Children.

Thursday's program will include Dr. Riggin, Dr. Walter L. Bierring of Des Moines, on Electrocardiograph in Tuberculosis, Dr. John H. Peck on The Tuberculin Test, Dr. Arnold Smythe on The Results of Research Work in Childhood Tuberculosis, Dr. E. A. Meyerding of St. Paul, secretary of the Minnesota State Medical Society, Miss Katherine Radebaugh of Minneapolis, on Aftercare and Rehabilitation of Tuberculous and Cardiac Patients, and possibly Dr. Henry Boswell of Sanatorium, Mississippi, president of the National Tuberculosis Association.

Other features of the two day program will be the address at the annual dinner Thursday by Governor Dan Turner, an address Thursday afternoon by Wellington P. Shahan, executive secretary of the Illinois Tuberculosis and Health Association. on Cooperation of Local Health Workers with Medical Societies and Other Groups in Their Counties, and a discussion of pending health legislation by Representative Frank C. Byers of Cedar Rapids.

Other speakers listed are Miss Agnes Samuelson, state superintendent of public instruction; Miss Mary Rathke, county superintendent Mills county; Dr. E. Marsh Williams, Oskaloosa; Dr. J. C. Painter, Dubuque; H. M. Cass, Huron, S. D.; Frank Miles, editor of the Iowa *Legionaire;* Mrs. J. J. Miller, Ackley; Effie Doan, president State Conference of Social Work and delegate to the White House Conference; Dr. D. C. Steelsmith, state commissioner of health, and Vernon D. Blank, managing director of Iowa State Medical Society.

INFLUENZA PERSISTS IN EPIDEMIC FORM

A current newspaper report indicates that in many of the eastern states influenza in epidemic form has appeared during the past two months. At some points, noticeably the United States Naval Academy at Annapolis, the epidemic has assumed such proportions that schools have been temporarily closed. The scope and magnitude of the present epidemic cannot as yet be measured. To many in more isolated communities, the persistence of influenza in epidemic form has not attracted attention.

In a report made under government auspices during the past year, it is indicated that the last six epidemics have occurred in this country since the pandemic of 1918 and 1919. The dates fixed for these epidemics are 1920, '22, '23, '26, the spring of 1928 and the winter of 1928 and 1929. The death rates during these epidemics have collectively exceeded the seasonal mortality by 250 thousand deaths, a total of nearly one-half as many deaths as occurred during the pandemic of 1918 and 1919. The most severe of the epidemics recorded was that of 1928 and 1929, in which the excess mortality reached 100 thousand. While the six epidemics recorded assumed more or less nation-wide proportions, the various sections of the country were by no means equally affected, and for this reason would not in each instance receive universal attention. It is stated that in each case the duration of the epidemic was about equal, the severity being maintained from a period of 16 to 30 days.

DR. McLAUGHLIN'S PUBLIC HEALTH SURVEY APPROVED BY COUNCIL

The following extract from the proceedings of the Council of the Iowa State Medical Society is of special interest to our readers:

Dr. McLaughlin's report on his Public Health Survey in Iowa was presented and discussed. Dr. Boice moved, seconded by Dr. Beam, "That the Council of the Iowa State Medical Society express its approval of the Public Health Survey in Iowa as conducted by Dr. McLaughlin; that it make a report of this approval through the Journal of the Iowa State Medical Society; and that it instruct the Legislative Committee of the Iowa State Medical Society to use all honorable means to secure passage of the budget as suggested in the survey." Carried unanimously.

—From Council Meeting, October 29, 1930.

DR. D. C. STEELSMITH STATE HEALTH COMMISSIONER

One of the first official acts of our recently inaugurated governor, Dan Turner, was the confirmation of the re-appointment of Dr. D. C. Steelsmith, of Des Moines, to the office of State Health Commissioner. Dr. Steelsmith has served the state of Iowa as Health Commissioner since the position was rendered vacant by the death of Dr. Henry Albert, which occurred April 12, 1930. Prior to that date Dr. Steelsmith had served as deputy health commissioner. During his administration he has been actively aggressive in furthering health matters and his re-appointment in his present position will be welcomed by the profession of Iowa. The Journal extends to Dr. Steelsmith every good wish in his reappointment.

SPEAKERS BUREAU ACTIVITIES

The Bureau Adds Another Service

An innovation in county medical programs was introduced by Dr. P. W. Van Metre, secretary of the Calhoun County Medical Society, when he asked the Speakers Bureau to arrange the Calhoun county medical programs for the entire year of 1931. The program committee of the Calhoun Society met with a member of the Speakers Bureau Committee and chose the topics they wished to have discussed. The further details were taken care of by the Bureau and the following program was finally completed:

Bright's Disease—January 16
- H. P. SMITH, Professor of Pathology, State University of Iowa.
- D. J. GLOMSET, M.D., Des Moines.

Heart—February 19
- H. W. RATHE, M.D., Waverly.
- E. L. WURTZER, M.D., Clear Lake.

Office Gynecology—March 19
- H. E. KLEINBERG, M.D., Des Moines.
- W. F. HARRIMAN, M.D., Sioux City.

Obstetrics—April 16
- F. W. RICE, M.D., Des Moines.
- E. D. PLASS, M.D., State University of Iowa.

Skin Clinic—July 16
- H. C. WILLETT, M.D., Des Moines.
- GEORGE MCCREIGHT, M.D., Des Moines.

Therapy—August 20
- R. L. PARKER, M.D., Des Moines.
- A. W. ERSKINE, M.D., Cedar Rapids.

Pediatrics—September 17
- R. H. MCBRIDE, M.D., Sioux City.
- B. A. MELGAARD, M.D., Sioux City.

Surgery—October 15
- E. M. MYERS, M.D., Boone.
- N. M. WHITEHILL, M.D., Boone.

The Bureau will be glad to plan similar programs for other localities. Arrangements are now being made for several meetings of the Franklin County Medical Society. If any other county or district society is interested in meetings of this nature, the Bureau will be glad to arrange it to suit the wishes of the society members.

January Placements

Des Moines County Medical Society, Burlington. December 30.
- JOHN I. MARKER, M.D., Davenport.
- L. A. BLOCK, M.D., Davenport.
- C. A. BOICE, M.D., Washington. County Contract.
- L. F. CATTERSON, M.D., Oskaloosa.
- J. W. LAIRD, M.D., Mount Pleasant.
- V. D. BLANK, Des Moines.

Y. M. C. A. Forum, Des Moines. January 5.
- E. D. PLASS, M.D., State University of Iowa. The Iowa Eugenics Law.

Poweshiek-Keokuk Medical Society, What Cheer. January 7.
- C. G. SMITH, M.D., Granger. State Society and
- V. D. BLANK, Des Moines. Legislation.

Wayne County Medical Society, Corydon. January 7.
- W L. BIERRING, M.D., Des Moines. Hypertension.

Kiwanis Club, Newton. January 7.
- V. D. BLANK, Des Moines. Preventive Medicine.

Clinton County Medical Society, Clinton. January 8.
- V. D. BLANK, Des Moines. County Contract.

Parent-Teacher Association, Cassidy School, Des Moines. January 13.
- FRED MOORE, M.D., Des Moines. Prenatal and Infant Care.

Dallas-Guthrie Medical Society and Auxiliary, Panora. January 15.
- E. D. PLASS, M.D., State University of Iowa. Eugenics.

Calhoun County Medical Society, Rockwell City. January 16.
- H. P. SMITH, M.D., State University of Iowa. Bright's Disease.

Sioux Valley Medical Society, Sioux City. January 20.
- C. G. SMITH, M.D., Sioux City, Progressive Medicine and Cooperation.
- V. D. BLANK, Des Moines.

Federated Women's Club, Ida Grove. January 20.
- WILLIAM JEPSON, M.D., Sioux City. Essentials for Health and Longevity.

Parent-Teacher Association, Mount Ayr. January 20.
- A. M. SMYTHE, M.D., Des Moines. Child Health and Welfare.

Veterinary Medical Society, Iowa State College, Ames. January 21.
- J. F. EDWARDS, M.D., Iowa State College. Canti Cancer Film.

Polk County Medical Society, Des Moines. January 27.
- J. L. KESTEL, M.D., Waterloo. Objective Diagnosis of Kidney Disorders.
- T. F. THORNTON, M.D., Waterloo. Stone in the Ureter.

WATCH THIS GROW!

Chest Clinics as Medical Society Program

The energy of the Speakers Bureau has been directed in still another direction. Through cooperation with the Iowa Tuberculosis Association, the Bureau is now in a position to schedule chest clinics as one of the regular program services offered to county medical societies. The Tuberculosis Association has consistently urged that these clinics be conducted as a regular county medical society program, and in taking over the task of making a clinic schedule, the Speakers Bureau wishes to emphasize this point. The preferred procedure is to hold the clinic from 1:00 to 5:00 p. m., followed by 6 o'clock dinner and a scientific program on diseases of the heart and lungs. The Bureau will be very glad to plan the evening program. We have many physicians on our speakers list whom we may use in addition to the clinicians. Some suggested titles are: coronary disease, cardiac therapy, rheumatic heart, heart disease in children, differential diagnosis of heart disease, non-tuberculous chest diseases, bronchiectasis, diagnosis of tuberculosis, present day treatment of tuberculosis, tuberculosis in childhood, tuberculin, etc.

These clinics are given upon the invitation of the president or the secretary of the county society. After the date is definitely fixed, the preliminary arrangements for the clinic are made by a public health nurse, sent from the staff of the Iowa Tuberculosis Association a few days prior to the clinic. The clinic is held primarily for the benefit of the physicians, and should not be regarded as the usual diagnostic clinic, but as a demonstration of newer methods of examination and treatment. The patients are selected and referred by members of the county medical society. In order that the greatest benefits may be secured, physicians from adjoining counties should be invited to attend the entire day's program.

The value of these clinics has become well known to the medical profession throughout the state. The schedule is rapidly becoming filled and further requests should be made as soon as possible. Plans are so made that Friday is the most convenient day to hold these clinics, but in the event that the county medical society meeting date cannot be changed, adjustments can usually be made.

SOCIETY PROCEEDINGS

Black Hawk County Annual Meeting

Tuesday, January 6, the members of the Black Hawk County Medical Society met for their regular annual meeting in Waterloo. H. P. Smith of the State University of Iowa presented a paper on the Endo-Riticulo System. The following officers were elected to serve during 1931: Dr. C. W. Ellyson of Waterloo, president; Dr. George E. Hearst of Cedar Falls, vice president; Dr. Eugene E. Smith of Waterloo, secretary; Dr. A. A. Hoffman of Waterloo, treasurer; Dr. William L. Hearst of Cedar Falls, delegate; and Dr. Thomas F. Thornton of Waterloo, alternate.

Boone County Annual Meeting

The election of officers for the Boone County Medical Society which took place Tuesday, December 30, resulted in Dr. Nelson M. Whitehill of Boone being named president; Dr. William Woodburn of Boone, vice president; and Dr. Mark C. Jones of Boone, secretary and treasurer. Dr. Jones was also elected delegate and Dr. B. T. Whitaker of Boone, alternate.

Boone County Social Meeting

On January 8, the members of the Boone County Medical Society met at Ogden in honor of two retired physicians, Drs. Sickler and Mellott. A three-course dinner was served by the Ogden doctors, after which Dr. Whitehill, the new president, welcomed the honored guests. Dr. Mellott responded to the greeting with some interesting reminiscences of medical practice in the early days of Boone county.

Mark C. Jones, M.D., Secretary.

Bremer and Butler Societies Joint Meeting

A combined meeting of the Bremer County and Butler County Medical Societies was held on January 22, in the staff room of St. Joseph's Mercy Hospital, Waverly. Drs. L. C. Kern of Waverly and Bruce Ensley of Shellrock, presented a detailed report of the recent special session of the House of Delegates, which met to consider the report of the Committee on Medical Education and Hospitals. After a lengthy discussion, it was decided that a committee be appointed to draw up resolutions expressing the sentiment of the two county societies concerning proposed legislation, and to forward such resolutions to the secretary of the state society.

F. R. Sparks, M.D., Secretary.

Buchanan County Annual Meeting

The annual meeting of the Buchanan County Medical Society was held Wednesday, December 17, in Independence. The results of the election were: Dr. B. B. Sells of Independence, president; Dr. J. C. Shellito of Independence, vice president; Dr. John F. Loeck of Aurora, secretary and treasurer; Dr. Loeck, delegate, and Dr. H. A. Householder of Winthrop, alternate.

Calhoun County

The newly organized Speakers Bureau of the Iowa State Medical Society has arranged a year's program for the Calhoun County Medical Society. These programs will take the form of post-graduate courses and the first one took place Friday, January 16, with Dr. D. J. Glomset of Des Moines, and H. P. Smith, professor of pathology at the State University of Iowa, as the speakers. They discussed various kidney diseases, using lantern slides to illustrate their papers.

Cerro Gordo County

The regular meeting of the Cerro Gordo County Medical Society, held Tuesday, January 20, was devoted entirely to a discussion of the report of the Committee on Medical Education and Hospitals which was presented to the House of Delegates in special session, December 17. Drs. E. L. Wurtzer and George Crabb, delegate and alternate delegate, gave a detailed report of the meeting and the society discussed the problem at great length. Physicians from Franklin and Worth counties were present at the meeting.

T. E. Davidson, M.D., Secretary.

Dallas-Guthrie Society

The regular quarterly meeting of the Dallas-Guthrie Medical Society was held in Adel, Thursday, January 15. After a noon luncheon, the following scientific program was presented: Leukemia, with report of a case, W. V. Thornburg, M.D., of Guthrie Center; and Headaches, R. W. Beckman, M.D., of Perry.

Decatur County Annual Meeting

Dr. C. E. Sixbury of Lamoni, was re-elected president of the Decatur County Medical Society at its annual election held Tuesday, December 30. Other officers are: Dr. M. W. Rogers of Leon, vice president; Dr. Fred A. Bowman of Leon, secretary and treasurer; and Dr. J. W. Wailes of Davis City, delegate.

Franklin County Annual Meeting

Tuesday, December 30, the annual meeting of the Franklin County Medical Society was held in Hampton, and the following officers elected for 1931: Dr. G. T. McCauliff, president; Dr. Edward D. Allen, vice president; Dr. William R. Arthur, secretary and treasurer; Dr. L. E. Haecker, delegate; and Dr. F. L. Sieberts of Geneva, alternate.

Greene County Annual Meeting

The annual meeting of the Greene County Medical Society was held in Jefferson, Friday, January 9, and Dr. Ben C. Hamilton, Jr., of Jefferson, was chosen to head the organization during 1931. Dr. George W. Kester of Grand Junction, was named vice president, and Dr. John R. Black of Jefferson, was re-elected secretary and treasurer. The delegate and alternate to the Iowa State Medical Society are respectively, Dr. George W. Franklin of Jefferson, and Dr. Hamilton.

Henry County

Members of the Henry County Medical Society met in Mt. Pleasant, Tuesday, January 13, with the dentists and nurses of the county as their guests. After a 6:30 dinner, the following papers were presented: Anesthesia, Mrs. Donaldson, superintendent of the Memorial Hospital; Pain, J. W. Laird, M.D., Mt. Pleasant.

Ida County Annual Meeting

The Ida County Medical Society met Friday, January 9, in Ida Grove for the purpose of electing officers. The results were: Dr. E. S. Parker of Ida Grove, president; Dr. T. J. Houlihan of Ida Grove, vice president; Dr. C. G. Bretthauer of Holstein, secretary and treasurer; Dr. M. W. Grubb of Galva, delegate; and Dr. R. B. Armstrong of Ida Grove, alternate. After the election, a short discussion was held concerning the recent report of the Committee on Medical Education and Hospitals.

C. G. Bretthauer, M.D., Secretary.

Jasper County Annual Meeting

Dr. R. W. Wood of Newton, was elected president of the Jasper County Medical Society at the annual meeting of that organization held in Newton, Wednesday, January 7. Other officers are: Dr. J. W. Young of Newton, vice president, and Dr. R. S. McLaughlin of Monroe, secretary and treasurer.

Johnson County

One hundred and one members of the Johnson County Medical Society attended the banquet and program held in Iowa City, Wednesday, January 7. Following the banquet, Andrew H. Woods, M.D., addressed the group on Neurasthenia, and William Malamud, M.D., spoke on Psychotherapy in Neurasthenia with a Special Emphasis on the Psychoanalytic Method.

Linn County

W. H. Cole, M.D., of Washington University, St. Louis, spoke on Infections of the Liver at the meeting of the Linn County Medical Society held Thursday, January 8, at the Hotel Roosevelt in Cedar Rapids.

Marshall County

Tuesday, January 6, members of the Marshall County Medical Society met at the Hotel Tallcorn for a six-thirty dinner, after which Henry Schmitz, M.D., of Chicago, delivered an illustrated lecture on Early Diagnosis of Cancer.

Mills County Annual Meeting

The Mills County Medical Society met at Glenwood, Monday, December 22, and elected the following officers for 1931: Dr. I. U. Parsons of Malvern, president; Dr. Edgar Christy of Hastings, vice president; Dr. James M. Donelan of Glenwood, secretary and treasurer; Dr. Parsons, delegate; and Dr. Christy, alternate.

Muscatine County Annual Meeting

The December meeting of the Muscatine County Medical Society was held at the Muscatine Hotel. After a six-thirty banquet, officers for the ensuing year were elected as follows: Dr. G. A. Sywassink, president; Dr. V. O. Muench, vice president; Dr. E. L. Emerson, secretary and treasurer; Dr. L. C. Howe, delegate; and Dr. A. L. Bryan, alternate. The scientific program consisted of two moving picture films: Intestinal Peristalsis and Emergency Surgery of the Extremities.

No scientific program was presented at the January meeting of the Muscatine County Medical Society. The entire time was taken up in formulating plans to take over the contract for care of the indigent sick, since the county board of supervisors has accepted the county society contract.

E. L. Emerson, M.D., Secretary.

Pocahontas County

The first meeting of the new year for the Pocahontas County Medical Society was held Friday, January 16, in Pocahontas. The scientific program was furnished by John H. Hovendon, M.D., of Laurens, who spoke on Birth Injuries of Children.

Polk County

Members of the Des Moines Academy of Medicine and Polk County Medical Society held their regular monthly meeting at Hotel Fort Des Moines, Tuesday evening, January 27. After the introduction of new members and committee reports the following scientific program was presented: Objective Diagnostic Methods of Kidney Disorders, John L. Kestel, M.D., of Waterloo, and Stone in the Ureter, Thomas F. Thornton, M.D., also of Waterloo. These excellent lectures were ably discussed by several members of the society. Eighty-five were in attendance.

Scott County

D. M. Lierle, M.D., of Iowa City, was the speaker of the evening, Tuesday, January 6, when members of the Scott County Medical Society met in Davenport for their regular meeting. Dr. Lierle's subject was Allergy in Relation to Otolaryngology.

Washington County

Tuesday, January 6, members of the Washington County Medical Society met in regular session and heard Oscar H. Plant, M.D., of the State University

of Iowa, speak on Modern Conceptions of Drugs that Affect the Heart. Dr. Plant illustrated his talk with a moving picture film.

Wayne County Annual Meeting

Members of the Wayne County Medical Society met in Corydon, Wednesday evening, January 7, for their annual meeting. Walter L. Bierring, M.D., of Des Moines, presented the scientific program for the meeting, speaking on Hypertension. Officers elected for 1931 were: Dr. B. B. Parker of Allerton, president; Dr. J. Harvey McCall of Allerton, secretary and treasurer; Dr. U. L. Hurt of Seymour, delegate; and Dr. A. E. Davis of Seymour, alternate.

Winneshiek County Annual Meeting

At its meeting, Monday, December 29, the Winneshiek County Medical Society elected the following officers to serve during 1931: Dr. J. A. Juen of Ossian, president; Dr. V. J. Horton of Calmar, vice president; and Dr. A. F. Fritchen of Decorah, secretary and treasurer.

Wright County Annual Meeting

Officers for the Wright County Medical Society include Dr. J. H. Sams of Clarion, president, and Dr. J. R. Christensen of Eagle Grove, secretary and treasurer.

Sioux Valley Eye, Ear, Nose and Throat Society

The newly elected president of the Sioux Valley Eye, Ear, Nose and Throat Society, is Dr. James E. Reeder. Other officers named at the meeting held in Sioux City, January 20, are Dr. F. L. Secoy, vice president; and Dr. J. C. Decker, secretary and treasurer. Guest speakers were C. M. Anderson, M.D., and W. I. Lillie, M. D., both of Rochester, who presented The Paranasal Sinuses as a Focus of Infection and Retrobular Neuritis, Its Etiology and Treatment.

F. H. Roost, M.D., Secretary.

Sioux Valley Medical Association

The thirty-sixth annual winter session of the Sioux Valley Medical Association was held in Sioux City, January 20 and 21. Both mornings were given over to clinics, while the afternoons were taken up with the presentation of scientific articles. Following is the complete program: Heart Clinic, Frederick A. Willius, M.D., Rochester; Pediatric Clinic, W. McKim Marriott, M.D., St. Louis; Clinic on Hand Contractures, Sumner L. Koch, M.D., Chicago; Urological Clinic, Frederick E. Foley, M.D., St. Paul; Medical Clinic, Campbell P. Howard, M.D., Montreal; Acquired Contractures of the Hand, Sumner L. Koch, M.D., Chicago; Some Principles Underlying the Treatment of Heart Failure, Frederick A. Willius, M.D., Rochester; Oxygen and Carbon Dioxide Variations Accompanying the Relief of Pain, Ralph M. Waters, M.D., Madison; Allergy as Related to the General Practitioner, William W. Duke, M.D. Kansas City; Some Practical Points in the Care and Feeding of Infants and Children, W. McKim Marriott, M.D., St. Louis; The Different Types of Anemias, Their Diagnosis and Treatment, Raphael Isaacs, M.D., Ann Arbor; Surgical Treatment of Hydronephrosis: A New Operation for Stricture at the Uretero-Pelvic Junction, Frederick E. Foley, M.D., St. Paul; Some Aspects of the Treatment of Carcinoma and Angioma with Radium and Radon, Frank E. Simpson, M.D., Chicago; The Physiology and Pathology of the Parathyroid Glands, Arno B. Luckhardt, M.D., Chicago; The Common Cold, Its Complications and Treatment, Campbell P. Howard, M.D., Montreal; Focal Infection and Elective Localization, Edward C. Rosenow, M.D., Rochester.

INTERESTING NEWS
In Brief

A new plan of hospital fees will be tried by the Mary Imogene Bassett hospital at Cooperstown, New York, which provides for a fee of $25 for a single individual or $100 for a family, paid to the hospital in advance. This fee will provide the necessary hospital care for the individual or family required during that year without additional expense, with the exception of maternity cases. The hospital staff reserves the right to decide whether a patient shall be treated at home or received at the institution.

Walter J. Greenleaf, in a release through the United States Daily, states that the average income of well established physicians in small communities today varies from $2,000 to $5,000 per year. With success and ambition, such a doctor may increase his income as high as $8,000 per year. Specialists vary greatly in their earnings, the average of all specialists, however, being about $16,000.

Mrs. Grace I. Conners, widow of the former newspaper publisher, William J. Conners of Buffalo, New York, has offered to convert her million-dollar Long Island mansion into a research institute for cancer. Mrs. Conners has made overtures to Doctors Walter B. Coffey and John Humber, of San Francisco, whose recent announcement of researches in cancer etiology received national mention.

At a recent meeting of the board of supervisors in Decatur county a report indicated that $47,000 was available in a fund created to finance a hospital for this county. This amount is considered adequate to warrant the building of a hospital at this time although it was felt when this fund was created that $75,000 would be required.

A recent announcement by A. B. Funk, state industrial commissioner, states that during the past two years over $1,300,000 have been paid in compensation settlements, covering 9,790 accidents. Mr. Funk commented favorably upon the new law increasing medical allowances in compensation cases for both physicians and hospitals' bills.

Announcement has been made by the University

of Pennsylvania that intensive researches in tuberculosis and cancer will be conducted in that institution following the lines of research recently published, of directly observing tumor growth in the middle ear of a rabbit through an especially constructed window in the ear drum.

Recent figures compiled by the American Medical Association would indicate that the United States has the largest per capita number of physicians of any of the leading countries, having a total of 1,266 per 100,000 of population. Austria and Great Britain run a close second and third with 1,139 and 1,114 respectively.

Bruce Miller, against whom the state of Iowa is asking an injunction to restrain him from practicing medicine without license, has asked the court for a more specific bill. Miller was formerly associated with the Baker Institute and the Hoxsey clinic at Muscatine and is now at liberty on a $1,000 bond.

Due to the recent outbreak of rabies among live stock in Muscatine county, a request for state aid has been filed with Mark Thornburg, secretary of the State Department of Agriculture. Prompt action is expected to control any widespread outbreak.

Dr. Carl Jordan, assistant professor of hygiene and preventive medicine at the University of Iowa, has been chosen to head the recently formed Des Moines County Health Unit and will begin his new duties February 1.

J. T. Painter, a former resident of Spencer, Iowa, has donated to the county a tract of land for the erection of a county hospital. It is expected that the gift will be used for the purpose intended at an early date.

Gifts, totaling $50,000, have been made available for the erection of a city hospital at Red Oak, Iowa. Additional sums in the amount of $10,000 may be used for an endowment.

The Marion County Medical Society has recently petitioned the board of supervisors for the appointment of a trained social worker for work in and about Pleasantville.

PERSONAL MENTION

Dr. Arthur N. Sloan of Sioux City, was elected president of the Lutheran Hospital Staff of that city at a meeting held Monday, January 12.

Dr. C. F. Bosch is coming from the east, where he has been practicing in New Jersey and New York, to join the personnel of the Moulton Hospital in Bellevue. Dr. Bosch is a graduate of the State University of Iowa.

Dr. Henry S. Houghton, dean of the State University of Iowa College of Medicine, addressed the Burlington Rotary Club, Monday, January 26, on "Experiences in the Orient."

Dr. W. A. Harris of Centerville, announces the association of Dr. T. F. Lindberg with him in the practice of medicine. Dr. Lindberg is a graduate of Northwestern Medical School and served his interneship at the Methodist Hospital in Des Moines.

Dr. J. O. Cook of Madrid was recently honored by the government in being elevated to the title of lieutenant colonel in the medical section of the officers reserve corps of the United States Army.

Dr. T. J. Dorsey of Ft. Dodge, was re-elected president of St. Joseph Mercy Hospital staff at the annual staff dinner and meeting held Monday, January 12.

Dr. E. D. Plass, head of the department of obstetrics and gynecology of the State University College of Medicine, spoke before the Y. M. C. A. Forum Club in Des Moines, Monday, January 5.

Dr. Charles A. Nicoll, formerly of Linden, has decided to locate in Livermore, and expects to be ready to continue his practice there by the first of February.

Dr. Donald Macrae of Council Bluffs, spoke before the American College of Surgeons at a meeting held recently in St. Joseph, Missouri. The subject of his paper was "The Necessity of Distinguishing the Degree of Emergency in the So-called Acute Abdomen."

Dr. William Jepson of Sioux City, addressed the Ida Grove Women's Club, Tuesday, January 20. The program was arranged through the Speakers Bureau of the Iowa State Medical Society and Dr. Jepson's subject was, "Essentials for Health and Longevity."

Dr. Walter F. Harriman has opened an office in Sioux City for the practice of gynecology and surgery. Dr. Harriman is a graduate of the University of Pennsylvania Medical School, and for the past three years has been clinical instructor in surgery at Temple University.

Dr. William E. Cody of Sioux City, was elected president of the Medical Staff of the Methodist Hospital, at the annual dinner held Monday, January 12.

Dr. Carl Painter, president of the Dubuque County Medical Society, was the principal speaker at the noon day luncheon of the Kiwanis Club, held Monday, January 12, in Dubuque. He spoke on preventive medicine, public health, and the proposed county health unit.

Dr. H. B. Wilkinson is leaving Denison, where he has practiced for eleven years, and is moving to Denver, Colorado, having received an appointment as medical officer of the Civil Service.

The *Military Surgeon* lists the following promotions in the Medical Reserve Corps: Dr. H. N. Anderson of Woodbine, to lieutenant colonel; Dr. Edward V. Bookhart of Ida Grove, to major; Dr. A. B. George of Burlington, to lieutenant colonel; Dr. Ewen M. MacEwen of Iowa City, to major; Dr. Fred L. Nelson of Ottumwa, to lieutenant colonel; Dr. O. F. Parrish of Grinnell, to lieutenant colonel; Dr. Ernest I. Woodbury of Burlington, to lieutenant colonel.

DEATH NOTICES

Fegers, Charles H., of Keokuk, died January 19, at the age of fifty-eight after an illness of eight months. He was graduated in 1895 from the Keokuk Medical College, and had been a member of the Lee County Medical Society.

Hennessy, James, of Emmetsburg, died January 15, at the age of fifty-five of pneumonia. He was graduated in 1906 from the College of Physicians and Surgeons, Keokuk Medical College. At the time of his death he was a member of the Palo Alto County Medical Society.

Printz, Edward T., of Moulton, died January 12, at the age of seventy-five as the result of injuries received in an automobile accident, December 24. He was graduated in 1884 from the University of Illinois College of Medicine. At the time of his death he was a member of the Appanoose County Medical Society.

Ruan, John Arthur, of Beacon, died January 11, in a Des Moines hospital, at the age of sixty, following a long illness. He was graduated in 1900 from the Central Medical College of St. Joseph, Missouri. At the time of his death he was a member of the Mahaska County Medical Society.

THE PROBLEM OF THE INDIGENT SICK

A recent article by Dr. E. P. Veatch in the Journal of the Oklahoma State Medical Association calls attention to the need of bringing medical service within the reach of the indigent in rural sections of the country. He states, "Under the present social order it is incumbent upon the county commissioner to decide who is sick and who is not. He must decide who is deserving or not deserving. He has never studied medicine a day, he has not studied the problem of the indigent sick. In cases in which he is in doubt or does not wish to decide, he reminds the sick and the physician that he is a member of a committee of three and that he cannot decide this. Thus he dodges the issue." * * * "In most cases when he wants a road or bridge built he hires an engineer. When he wants a public building constructed he hires an architect, but when it comes to passing upon a medical problem he considers himself thoroughly competent to pass on these conditions; and should he decide unfavorably, asks the neighbors to take care of the patients themselves or raise some money among the friends to pay for this service." * * * "The author believes that this is the solution. The county health office should be given the authority to pass on the physical condition of the patient, and an assistant be furnished to give the social and financial rating."

PHYSICIANS DESIRED FOR GOVERNMENT POSITIONS

The United States Civil Service Commission announces open competitive examinations for the filling of vacancies occurring in the Federal classified civil service throughout the United States. The positions to be filled with the United States Veterans Bureau, with entrance salaries ranging between $3,200 and $3,800 per year; the United States Public Health Service, with salaries ranging between $3,200 and $3,800 per year; Indian Service, with an entrance salary of $2,900 per year; the Coast and Geodetic Survey with an entrance salary of $2,700; Panama Canal service with salaries ranging between $333.33 and $385.41 per month. All positions will be filled on the basis of Civil Service requirements, the details of which may be secured by addressing the United States Civil Service Commission at Washington, D. C.

RIGGS OPTICAL COMPANY ANNOUNCES NEW CHICAGO MANAGEMENT

Mr. Edw. W. Arnold, well known territorial supervisor for Riggs Optical Company, has been selected as manager of this company's Chicago city office. Mr. Arnold has had many years' training and experience in the optical field. He is a qualified executive and is conversant with all phases of optical work and service. His knowledge of the problems which confront the profession and his cooperative spirit will be welcomed by those in the territory served by Riggs.

PERSHING HALL MEDICAL MEMORIAL

A recent announcement from headquarters of the American Medical Association (December, 1930) called attention of the profession to the erection of Pershing Hall Memorial in Paris in recognition of the services of the medical profession of the United States in the World War.

It is proposed that $10,000 will be raised in this country so that this memorial hall may be properly fitted as a museum. Donations from $1 to $25 will be accepted and it is hoped that a very large number of doctors will be represented in the project. Contributions will be acknowledged in the Bulletin of the American Medical Association and also in the donor book, which will be permanently stored in the hall itself and become a part of their official records.

Subscriptions should be sent to the Committee on Pershing Hall Medical Memorial, 535 N. Dearborn Street, Chicago, Illinois.

NEW ADDITION TO NEW YORK POLYCLINIC MEDICAL SCHOOL AND HOSPITAL

The New York Polyclinic Medical School and Hospital located on W. 50th Street formally opened a new twelve story addition the first of January. This million and one-half dollar addition will provide additional space for clinics since seven floors will be devoted exclusively to this practice. Four floors will be used for private patients. The entire tenth floor of the main building has been reconstructed into an operating suite with seven new operating rooms. The new addition will increase the capacity of the hospital to 450 patients.

HISTORY OF MEDICINE IN IOWA

Edited by the Historical Committee

DR. WILLIAM JEPSON, Sioux City
DR. ARTHUR D. WOODS, State Center
DR. FRANK M. FULLER, Keokuk
DR. WALTER L. BIERRING, Des Moines
DR. NORMAN F. MILLER, Iowa City

The History of the Marion County Medical Society*
With Individual Biographies

(Continued from January)

F. M. ROBERTS, M.D., Knoxville

Dr. A. D. Wetherell was born in Burlington, Vermont, on July 12, 1818, and continued to reside in his native state until 1833, when his parents removed to Ohio and settled on a farm where he was principally raised. He received his education in the common schools and in the preparatory department of Granville College. After attaining his majority, he engaged in teaching and having made choice of medicine as a profession his leisure hours were devoted to reading. After a thorough preparation, he attended lectures at the Ohio Medical College in Cincinnati and was graduated in 1844. He practiced nearly thirteen years in Licking county and in October, 1856, settled at Knoxville. He was the first physician, in 1866, at the home for the county poor and indigent, was a charter member of the Marion County Medical Society, its first president, and pension examiner. Dr. Wetherell was widely known for his individuality and practiced with marked success until the time of his death in 1896.

Dr. E. H. Keables was born in New Haven, Connecticut, March 14, 1820. He resided in his native state until ten years of age when he went to New York and after a residence of five years in that state went to Jackson county, Michigan, where he lived for three years. His early life was spent in acquiring an education and in teaching. Having selected the practice of medicine as a profession, he pursued his medical studies in connection with his teaching and attended a course of lectures at Rush Medical College, Chicago, and in 1848 commenced to practice medicine. In 1852, he went to California and practiced medicine three years in Sacramento. In 1855, he located in Pella, Iowa. In 1858, he attended medical lectures in Keokuk and in 1861 was graduated from the Medical College in St. Louis. He was engaged in active practice in Marion county until 1870, when he removed to Kansas where he lived five years. He served as a member of the Twelfth General Assembly of the Kansas Legislature. In 1875 he once more made his home in Pella and resumed his practice, in which he secured a full share, meeting with uniformly good success.

Dr. B. R. Prather was a native of Bartholomew county, Indiana, and was born March 23, 1823. He commenced the study of medicine when twenty-one years of age. He then emigrated to LaGrange, Lucas county, Iowa, in 1860, and practiced medicine there for two years. In 1862 he helped make up Company G, 34th Iowa Infantry and went to war as a private. He soon thereafter was surgeon of his company in which capacity he continued for seven months. The latter years of his life were spent in the practice of medicine at Columbia.

Dr. H. J. Scoles was born in Harrison county, Ohio, on July 11, 1825. His early life was that of a farmer boy. He decided early to devote himself to the practice of medicine and after thorough preparation under a preceptor attended lectures at the College of Physicians and Surgeons at Keokuk and was graduated in 1853. His first experience was with an epidemic of smallpox in the Ohio state penitentiary. In 1856 he located in Marion county in the practice of medicine. During the Civil War he enlisted in the Fourth Iowa Infantry and was appointed assistant surgeon. After the close of the war he returned home and resumed the practice in which he was very successful. He was a Knight Templar more than thirty years, a Mason more than fifty years, a charter member of the Marion County Medical Society, and its first secretary.

Dr. B. F. Keables was born in Elba, Genesee

CORRECTION

In listing the membership of the Marion County Medical Society as it appeared in the first medical directory published in 1876, Dr. N. R. Cornell of Knoxville was listed as a non-graduate. This was an error, as he was a graduate of the Geneva (New York) Medical College in 1848.

* Address before the Marion County Medical Society, December 13, 1928, and subsequent additions.

county, New York, in 1828, and when four years of age was taken by his parents to Jackson county, Michigan, and lived there until nineteen years of age. In 1847 he removed to Illinois where he remained three years, most of the time teaching and studying medicine. In 1850 he attended medical lectures at Keokuk and was graduated an M.D. In 1852 he came to Pella and commenced the practice of his profession. He always took a deep interest in educational matters. In the spring of 1862 he was commissioned assistant surgeon of the Third Iowa Infantry and in October of the same year was promoted to surgeon by the special request of the colonel and held this position until mustered out. In 1871-1872 he represented his district in the Thirteenth General Assembly and was elected as his own successor. His army experience caused him to have quite an extensive and successful private practice in surgery. He was well known throughout the county as a physician and surgeon, was a member of the Odd Fellows Lodge and of the Masonic Fraternity. Death came in 1911, at the age of eighty-eight.

Dr. Thomas J. Kirkwood was one of the leading physicians and most prominent citizens of Otley, Marion county, Iowa. He was born April 3, 1830, in Ohio, where he was reared on a farm. He came to Marion county in 1855, and settled in Pleasantville where he entered upon the practice of his profession. From the beginning his practice increased rapidly and had soon extended into surrounding counties. In 1875 he moved to Otley where he had as large a practice as he could find strength and time to attend. He was a man highly respected for his business integrity and a gentleman of fine medical talent.

Dr. George Allen was born in Carroll county, Ohio, February 23, 1833, and was reared in his native state. He began early in life to prepare himself for the practice of medicine. In 1872 he came to Marion county and engaged in the practice of his profession at Pella where he was very successful. He is said to have been unique in his habits and manners. His cabinet of specimens of his operations would be a credit to any physician of larger cities and the success that he attained was a flattering testimonial of his skill.

Dr. A. Guthrie was born in West Virginia, December 6, 1841. In 1862 he decided upon the practice of medicine as a profession. He attended Ohio Medical College in Cincinnati and was graduated in 1866 and in 1867 received the appointment of resident physician in the Cincinnati Hospital and remained in this position two years. In 1869 he removed to Marion county, located in Pella where he entered upon the active duties of his profession. He was a member of the Des Moines Valley Medical Association, the Iowa State Medical Society, and was an assistant surgeon of the C. R. I. & P. railroad.

Dr. Samuel Buzard was born in West Virginia in 1842, attended lectures at Philadelphia University and was graduated in the spring of 1871. He came to Iowa in the same year and located at El Dorado, Monroe county, where he practiced until 1875, when he moved to Attica, Marion county, where he enjoyed a considerable practice.

Dr. J. A. Shrader was born in Washington county, Ohio, May 27, 1842. His youth was spent on a farm. He enlisted in the Civil War, October 14, 1861, 63d Ohio Regiment, and was severely wounded during the first year. As his parents had moved to Iowa he came west when discharged. Later he was appointed by Governor Kirkwood as special sanitary agent, to look after the welfare of Iowa troops. He commenced the study of medicine at Logan, Ohio, in 1864, under the direction of his uncle, Dr. A. J. Shrader. He took two courses of lectures at the College of Physicians and Surgeons and then went to Kansas, locating at Auburn, where he commenced the practice of his profession continuing for two years and in 1867 located at Red Rock, Marion county, Iowa. He remained in Red Rock until May, 1883, when he moved to Monroe, Iowa. While in practice at Red Rock, he attended a primipara, Mrs. Sinclair, forty years of age, that required a Caesarian section performed with the assistance of Dr. N. R. Cornell of Knoxville. This was published in the Journal of Obstetrics, St. Louis, in July, 1882. It was the first Caesarian section performed in Marion county. He was a brother of Dr. John C. Shrader, who was Professor of Obstetrics and Gynecology in the Medical Department of the State University at Iowa City. Doctor Shrader at this date, January 1, 1930, is living at East Moline, Illinois.

Dr. C. C. Shinnick was born in Zanesville Ohio, August 12, 1846. He enlisted in the Thirteenth Ohio Cavalry February 4, 1864, and was transferred to the medical department and assigned to duty in the U. S. hospital at Baltimore, where he acted as hospital steward. While here he decided to make the practice of medicine his profession and began study as his time would permit. In 1867 he came to Iowa and in 1870 located in Marion county, where he attained a fair degree of success.

Dr. S. C. Bell was born in Clarksville, Pennsylvania, August 13, 1846, and moved with his parents to Iowa, in 1864, commenced the study of medicine under the direction of Dr. Wm. Crowder, of Springfield, Keokuk county, an old school practitioner, was graduated from the State University in the spring of 1875, and located in Attica, Marion county, that same year, where he built for himself an enviable reputation.

Dr. J. W. Mitchell was born in Washington county, Indiana, on July 19, 1847, and when five years of age was brought to Marion county, Iowa. His early life was divided between attending school and assisting in the management of the farm. He enlisted as a private in the Civil War when only seventeen years old, and served in the Third Iowa Cavalry until the close of the war. After his return from the army he decided to take up the practice of medicine and started reading with Dr. H. J. Scoles as preceptor. He attended lectures at Keokuk and was graduated from Detroit Medical College in 1870, and thereafter was actively engaged in the practice

of medicine. He was a charter member of the Marion County Medical Society. In 1876 he went to Philadelphia and took postgraduate work in Jefferson Medical College from which he received a diploma. Some time later he moved to Superior, Nebraska, where he died in 1919.

Dr. J. W. Finarty was born January 16, 1848, in Mason county, Virginia, and was taken by his parents to Marion county, Iowa, when only two years old. In November, 1863, he entered the government service of the Fifteenth Army Corps and was at the battles of Chattanooga, Atlanta, Savanah and Columbia, was with General Sherman on his march to the sea and was mustered out July 13, 1865. He returned home, commenced the study of medicine, attended lectures, and was graduated February 13, 1877. He located at Dallas, Marion county, Iowa, and later moved to Knoxville, where he continued in the practice of medicine until the time of his death in 1920 of angina pectoris.

Dr. D. L. Cole was born August 12, 1848, in Ashton county, Ohio, and came with his parents to Mahaska county, Iowa, where he received his early education. He then took a course of lectures at Keokuk Medical College and located in Bussey, Marion county, Iowa, in 1876.

Dr. C. E. James was born December 5, 1852 in Warren county, Iowa. He attended school for three years at Des Moines University and soon after began the study of medicine. He attended lectures at Keokuk and was graduated in 1880. He commenced the practice of medicine at the village of Swan in the summer of 1880, and five years later moved to Durham where he continued in the practice of medicine until his death from cerebral hemorrhage in 1916.

Dr. J. G. Lampier was an early physician at Hamilton, Marion county, Iowa. He was a native of Vermont, and when quite young removed to New York, where he educated himself for his profession. When twenty-two years of age he came to Ohio where he commenced the practice of medicine. He lived there until 1850, when he moved to Illinois where he resided for twenty years. He then came to Wapello county, Iowa, and settled at Eddyville. He served as a surgeon in the Civil War. He located at Hamilton, Marion county, Iowa, in 1880. He is said to have been worthy of the highest honors in his profession.

The town of Red Rock, Marion county, Iowa, was laid out in 1847. The first physician of this village was **Reuben Matthews**. **Dr. C. M. Gilky** and **Dr. J. W. McCulley** were the next physicians to locate in this pioneer thriving hamlet. Of these three physicians we have no further record.

(To be continued next month)

DR. ROHLF'S BIRTHDAY CLINIC

For a score of years, President Rohlf has celebrated his birthday in the manner of his choice, with clinics and a banquet to which many of his intimate friends, guest physicians and members of allied professions are invited. Monday, January 5, marked the twentieth of these annual clinics and Dr. Rohlf's sixty-fourth birthday. There were some one hundred guests present from Iowa and the middle west.

The clinics, at which approximately fifty patients received attention, began at 7 o'clock in the morning. Dr. Rohlf performed ten major operations and several minor ones, with the assistance of local surgeons, his former associate, Dr. R. H. Lott of Carroll, and Drs. J. R. Buchbinder of Chicago, and Norman Miller of Iowa City.

Following the morning clinics, the Sisters of Mercy Hospital served luncheon to the guests.

The afternoon session was opened by Dr. J. F. Auner of Des Moines, who presided at a skin clinic. The medical clinic included demonstrations and lectures by Dr. H. W. Rathe, Dr. Rohlf's assistant; Drs. Harold C. Habein and Albert M. Snell of the Mayo Clinic; Drs. H. J. Prentiss, Fred Smith, and N. F. Miller of the University of Iowa, and Dr. Buchbinder of Chicago.

Dr. L. A. West of Des Moines, former associate of Dr. Rohlf, acted as toastmaster at the evening banquet in the Hotel Fortner, at which many of Dr. Rohlf's friends paid tribute to his years of active service to his profession and his community. Among the guests was Mr. George Hise of Des Moines, president of the Iowa State Bar Association, who spoke on service to humanity, and expressed the wish that the two professions might be more closely associated in their work for mankind.

At the beginning of the dessert course an enormous birthday cake was presented to Dr. Rohlf by a group of Boy Scouts, thus offering their congratulations to a man who has for years been active in Boy Scout work. The cake represented a tradition of almost as long standing as the annual clinic itself, since each year for the past ten, Mrs. McDannell, of Nashua, has expressed her gratitude to Dr. Rohlf for saving the life of her daughter, by sending him a huge and elaborate birthday cake.

Dr. Rohlf concluded the evening's entertainment by thanking all those who had taken part in the clinics and expressing his appreciation of the fine cooperation of all the physicians of Waverly, which had made possible the success of the Waverly hospital.

MEDICAL TIMES AND LONG ISLAND MEDICAL JOURNAL

Announcement has been made that the *Long Island Medical Journal*, the official organ of the Long Island Medical Society, will, beginning with its January issue, be consolidated with the *Medical Times*, an independent publication. The *Medical Times* has just completed its fifty-ninth year of existence, whereas the *Long Island Medical Journal* was founded only twenty-four years ago. This movement of consolidation is entirely within keeping of the times and should prove efficient in giving the medical profession of Long Island a more useful and constructive official publication. The new journal will be known as the *Medical Times and Long Island Medical Journal.*

THE JOURNAL BOOK SHELF

BOOKS RECEIVED

*DOCTORS AND SPECIALISTS—A Medical Revue with a Prologue and a Good Many Scenes—By Morris Fishbein, M.D.—With Illustrations by Dan Layman.—Bobs-Merrill Company, Indianapolis.—Price, $1.00.

*HANDBOOK OF ANATOMY—By James K. Young, M.D., F.A.C.S.—Associate in Anatomy, Jefferson Medical College.—Revised by George W. Miller, M.D., F.A.C.S.—Seventh revised edition.—F. A. Davis Company, Philadelphia, 1930.—Price, $3.75.

*HUMAN ANATOMY—By Piersol.—Ninth edition, revised, under the supervision of G. Carl Huber, M.D., Sc.D., with 1734 illustrations, of which 1522 are original and 460 in color.—J. B. Lippincott Company, Philadelphia, 1930.—Price, $10.00.

*HYPERTENSION AND NEPHRITIS—By Arthur M. Fishberg, M.D.—Illustrated with 33 engravings and 1 colored plate.—Lea & Febiger, Philadelphia, 1930.—Price, $6.50.

*THE LONG TREK—Around the World with Camera and Rifle.—By Richard L. Sutton, M.D., Sc.D., LL.D., F.R.S.—With more than 200 illustrations from photographs made by the author.—And by: Richard L. Sutton, Jr., A.M., B.Sc., M.D.—The C. V. Mosby Company, St. Louis, 1930.

*MEDICAL BIOMETRY AND STATISTICS—By Raymond Pearl, Ph.D., Sc.D., LL.D., Professor of Biology in the School of Hygiene and Public Health, and in the Medical School, Johns Hopkins University, Baltimore.—459 pages.—Second edition, revised and enlarged.—W. B. Saunders Company, Philadelphia and London. Price, $5.50.

*A PRIMER FOR DIABETIC PATIENTS—By Russell M. Wilder, M.D., Professor and Chairman of the Department of Medicine, University of Chicago Clinics.—Fourth edition, revised.—138 pages.—W. B. Saunders Company, Philadelphia and London, 1930.—Price, $1.50.

RADIUM IN GENERAL PRACTICE—By A. James Larkin, M.D., D.N.B.—Illustrated—Paul B. Hoeber, Inc., New York.—Price, $6.00.

Review appears in this issue.

BOOK REVIEWS

DOCTORS AND SPECIALISTS

A medical revue with a prologue and a good many scenes, by Morris Fishbein, M.D. The Bobbs-Merrill Company, publishers. Price, $1.00.

This small volume of 118 pages has been written by one in a position to appreciate doctors and specialists at their full value and in a satirical essay amuse without offense. Each of the eighteen chapters contains an independent essay requiring some ten to fifteen minutes for perusal. This adapts the volume immediately to the needs of a doctor's waiting room and does so in a way not surpassed by any other volume of a similar character. On the other hand a thread of common interest carries through the entire volume so that the average reader who finds time to read the first few pages will rarely relinquish the book without having completed it. Indicative somewhat of its contents is his dedication to "Every doctor with a sense of humor—something a doctor must have to live at all." There is no doctor conducting his general practice or a specialty who will not read with pleasure this delightful satire.

HUMAN ANATOMY

By Piersol. Ninth edition, revised, under the supervision of G. Carl Huber, M.D., Sc.D., with 1,734 illustrations, of which 1,522 are original and 460 in color. J. B. Lippincott Company, Philadelphia, 1930. Price, $10.00.

This ninth edition of this well known text in Human Anatomy, originally prepared under the editorship of Dr. George A. Piersol, has undergone revision, bringing the text material entirely up-to-date. The greatest task in the present editorial revision consists of an introduction of the text of a consistent and uniform B. N. A. nomenclature. Revision of subject matter beyond the necessary incidental changes has been confined largely to sections dealing with the histogenesis of the blood elements, the development of the lymphatics and the primary veins, the peripheral nervous system. A limited number of new figures have replaced earlier illustrations and a few new figures have been added, however, without changing the figure sequence and the numbering of the figures of the eighth edition. The pagination of the eighth edition has been maintained, so that guides and outlines based on the last edition may be used with this edition without alteration.

This ninth edition maintains this time honored treatise in its enviable position as one of the outstanding text-books on anatomy in the English language.

HANDBOOK OF ANATOMY

By James K. Young, M.D., F.A.C.S. Associate in Anatomy, Jefferson Medical College. Revised by George W. Miller, M.D., F.A.C.S. Seventh revised edition. F. A. Davis Company, Philadelphia, 1930. Price $3.75.

This book is a very comprehensive compend of anatomy, the reason for revision being chiefly to consistently use the Latinized form of the Basle nomenclature in texts, plates and index. F.W.F.

HYPERTENSION AND NEPHRITIS

By Arthur M. Fishberg, M.D., Adjunct Attending Physician to Mount Sinai and Montefiore Hospitals, New York City. Pp. 566. Illustrated with 33 engravings and 1 colored plate. Cloth, $6.50 net. Lea & Febiger, Philadelphia, 1930.

Recent advances in hypertension on one hand and renal diseases on the other made an evaluation of the newly acquired facts in this field almost impera-

tive. Dr. Fishberg undertook this task and the result secured may be made plain by the following illustration: A man had been watching his friend perform a piece of work when he remarked, "You're doing a pretty good job, aren't you?" "Pretty good? H——! It's perfect!" replied the friend. The book deals with every phase of hypertension and Bright's disease and with the relations existing between these two conditions. It is very clearly written and has an extensive bibliography. The conclusions drawn are sound and the book throughout gives evidence of a thorough mastery of the subject by the author. The student of hypertension and Bright's disease will find in this volume a veritable gold mine in which it is a pleasure to dig. The bewildered practitioner will find in it an abundance of practical, common sense, which is so lamentably lacking in much of the current literature on this phase of medicine. In short, the book is an American Medical Classic. D. J. G.

THE LONG TREK

Around the World with Camera and Rifle. By Richard L. Sutton, M.D., Sc.D., LL.D., F.R.S. Fellow of the Royal Geographical Society, Member of the French Geographical Society, Professor of Dermatology, University of Kansas. With more than 200 illustrations from photographs made by the author. And by: Richard L. Sutton, Jr., A.M., B.Sc., M.D. Fellow of the Royal Geographical Society. The C. V. Mosby Company, St. Louis, 1930.

This volume has been presented by an eminent specialist in dermatology, who as an avocation has devoted much time to travel and big game hunting in Africa. The trip recorded in this book was planned as a reward to the author's son on his twenty-first birthday. While the trip included points completely belting the globe, the book for the most part describes the experience of the authors in eastern Africa, a region around Tanga and inland as far as Lake Victoria.

Having a definite interest in medicine and natural science, the volume presents certain phases of African travel ordinarily not encountered in a work of this sort. The numerous illustrations which add much to the interest in the book are reproductions of photographs made by the author.

The volume is printed on a high grade paper and is attractively bound.

MEDICAL BIOMETRY AND STATISTICS

By Raymond Pearl, Ph.D., Sc.D., L.L.D., Professor of Biology in the School of Hygiene and Public Health, and in the Medical School, Johns Hopkins University, Baltimore. 459 pages. Second edition, revised and enlarged. W. B. Saunders Company, Philadelphia and London. Price, cloth, $5.50.

"To an ever increasing degree modern science is becoming quantitative in its methods of thought and activity." This is particularly true of medical science. In appreciation of this fact this volume, written by a most eminent statistician and teacher, has been offered to the medical profession. Indicative of its scope the author states, "In this book the attempt will be made to show, by concrete examples, how the point of view of biometry, and the application of modern statistical methods, may be of use to the medical man in helping him draw correct conclusions from his facts, and to solve problems constantly arising in his work, which he cannot possibly hope to solve correctly without such methods."

The author introduces his subject by a discussion of terms and an historical survey which will orientate the reader. Next he discusses sources and the tabular presentation of statistical data. One is then introduced into the subject of graphical representation of statistical data, rates and ratios, life and death-rate tables and the theory of probability. With this background the reader is equipped for initiation into the study of mathematical formulae, and logistic curves in determining variation and correlation.

The volume while offered as "an introduction," appears quite adequate for the average physician's use and by means of carefully selected references can, no doubt, be made sufficient to the needs of even the advanced student of the subject.

A PRIMER FOR DIABETIC PATIENTS

By Russell M. Wilder, M.D., Professor and Chairman of the Department of Medicine, University of Chicago Clinics; formerly head of the section on Nutrition, Division of Medicine, Mayo Clinic. Fourth edition, revised. 138 pages. Philadelphia and London: W. B. Saunders Company, 1930. Cloth, $1.50.

This is a very handy primer. It is small enough to be carried in the pocket of the diabetic patient and large enough to contain the material necessary for him to know in order that he may rationally take care of his disease. It contains a chapter written for the physician, "Planning the Diabetic Diet Prescription," which makes it easy for the doctor to order a proper diet. It also briefly discusses coma and gangrene.

Dr. Wilder, in his preface, voices his objections to the high carbohydrate diet, stating that it increases the difficulty of treatment.

The statement, "It is perhaps just as well that insulin must be injected because generally people are careless with medicine," is especially true when the amount of food the hungry diabetic can take, depends upon the amount of insulin he takes.

It is a book that may be used by any type of diabetic. It is not written for the unassisted patient, however, and the guidance and interpretation of the physician is needed. Many recipes are given and menus planned. E.B.W.

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APPENDICITIS IN CHILDREN*

ALBERT H. MONTGOMERY, M.D., Chicago

Appendicitis is probably the most frequent surgical lesion found in the abdomen. As such, its importance has been recognized by an enormous mass of literature dealing with every phase of the subject, and what I may say will probably not add anything to the accumulated knowledge. I think, however, that it may be well worth while to present and emphasize certain aspects of this disease as it is found in children.

We may begin with the anatomy of the appendix. As you know, embryologically it develops on the left side of the abdomen, and by rotation and descent of the colon it finally comes to lie in the right iliac fossa. If it fails to rotate, the appendix may be found in the left iliac fossa with no transposition of the viscera. Sometimes it rotates but does not descend, in which case the appendix will be found lying high up under the liver. The extent of the peritoneal covering of the appendix is not always the same. In most instances the organ has a well developed peritoneal coat with a definite mesentery. In other cases the appendix will be found behind the peritoneal coat of the cecum, forming the so-called retrocecal type. In patients with this kind of appendix, the signs and symptoms of appendicitis will naturally be found somewhat posteriorly in the right flank. The appendix in a small percentage of cases may be found lying between the leaves of the mesentery in the region of the ileocecal junction, and is termed the mesenteric type.

During the first years of life, the lumen of the appendix is funnel shaped with the base toward the cecum so that it tends to empty readily. There is very little lymphoid tissue in the appendiceal wall at this time, so that infection is not likely to occur so easily as later on in childhood. Naturally these factors have a bearing on the frequency of appendicitis in infancy.

One of the misconceptions in regard to appendicitis, not only among the laity but also among doctors, is the idea that it is comparatively rare in children. While it is true that in the first two years of life the incidence is very small, probably for the reasons to which we referred when speaking of the anatomy of the appendix, I wish to emphasize the fact that in older children it is the most frequent surgical disease found in the abdomen. One thing that probably affects the age incidence in children is the fact that the toxicity and virulence of the bacteria in the intestinal tract is quite low in infancy and increases progressively as the child grows older. The relative frequency of intestinal worms in children is another causative factor, as these parasites are often found obstructing the appendiceal canal at the time of operation. Another point which I have noted rather frequently is the tendency of certain upper respiratory tract infections to localize secondarily in the abdomen, producing either peritonitis or appendicitis. In such cases the streptococcus is usually the offending organism. These children are very sick and the mortality rate is high. It should be noted in this connection that in children, although the colon group of organisms is found most often, the streptococcus and even the pneumococcus is not infrequent. You will be interested to know that in several cases we have found that the actinomycosis organism was the causative agent.

Another group that has attracted our attention is found in those patients who are taken down with an acute intestinal infection, probably from impure milk or water, and who develop appendicitis as a complication. Those cases are difficult to diagnose as the appendicitis comes on insidiously in the course of an acute enteritis and unless kept in mind, and looked for routinely, will be missed. All other etiologic factors which are found in adults may be present in children and are too well known to require enumeration.

In any discussion of the pathology of appendicitis as it occurs in children, we must take into

* Read before the Scott County Medical Society, Davenport, Iowa, October 7, 1930.

consideration certain anatomic factors that probably have a marked influence on the pathologic picture. In the first place, except in infants, there is a relatively large amount of lymphoid tissue in a child's appendix which absorbs the infection rapidly and spreads it quickly over a large area. In the next place, the wall of a child's appendix is comparatively thin, so that a very small spread of the infection brings it to the peritoneal coat. Finally, the omentum in the early years of life is so small that it has very little defensive power to wall off and localize the infection. This group of anatomic peculiarities shows how readily infection, which once affects the lumen of the appendix, may spread and involve the general peritoneal cavity in a very short time. In all cases the earliest signs of infection are found on the mucous lining of the appendix. Coming in contact with the lymphoid tissue it spreads rapidly in the submucous layer and proceeds by extension through the muscle layer to the peritoneum. The process may be catarrhal, suppurative, or gangrenous. Usually the distal portion of the organ shows the greatest involvement. This is probably due to mechanical obstruction in the lumen caused by kinks or strictures, or in many cases, fecaliths. Local perforation occurs most often at the site of such a fecalith as the result of pressure necrosis and at operation the stone is often seen lying free in the abdomen close to the hole in the appendix. In other cases the entire appendix may show an extensive inflammation. Peritonitis of a profuse spreading character which may rapidly become generalized, tends to occur even before perforation, especially in cases due to the streptococcus.

The history which we obtain in regard to the illness of a child is always open to doubt. Unfortunately, in younger children it must be obtained entirely from the parents, who are prone to color cold facts with warm emotion. A very good history can often be obtained from older children if the physician has the art of gaining the child's confidence. Practically all children are willing to tell you if they have a pain and will indicate its location in a general way. In a large percentage of cases they are apt to point to the region of the umbilicus. Information can be obtained from the parents in some cases of a history of frequent attacks of abdominal pain and vomiting or so-called "bilious attacks" which may aid in explaining the present trouble.

The clinical picture in adults usually begins with pain in the epigastrium but in children it may begin in the lower half of the abdomen. Often it is cramp-like in character and soon begins to generalize. In twenty-four hours, however, it will probably be localized in the right iliac fossa. Soon after the onset of the pain the child usually vomits once or twice; it is only in rare cases that nausea without vomiting is present. There is usually some fever, although of a moderate degree, rarely going over 102. In all cases of doubt the temperature should be taken rectally. The pulse is increased in proportion to the fever. The bowels usually exhibit a definite constipation but a certain small percentage of patients will show a diarrhea.

The information obtained by a physical examination of the child is so important that the physician should use all his art and skill in order to find out all that he can. I have always found that a kind, quiet manner is far less disturbing to a sick child than a boisterous, hail-fellow-well-met attitude. The examiner's hands should be warm and he should take great care to exercise gentleness in his palpation, especially at the beginning of the examination.

The physical examination should start with a careful inspection which may give some valuable information. Often the degree of toxicity is shown by a glance at the child's face. If general peritonitis is present the pinched, anxious expression will be evident, and the abdomen may show a general distention indicating an intestinal paralysis or it may be marked with intestinal patterns if there is a mechanical ileus. In other patients who have been more fortunate the face may merely show a slight flush of fever but a round mass in the abdomen will suggest a localized abscess. Still others may show faces distorted with pain as they lie curled up with the knees flexed to lessen the abdominal pressure. In order to properly examine a young or nervous child who struggles and resists all attempts at palpation it may be not only necessary but very wise to give a light general anesthetic, such as an ether rausch. This will cause the child to relax and still preserve the signs of tenderness and muscular rigidity when they are present.

The importance of gentleness cannot be too strongly emphasized. It is often best to examine the left side first if trouble is suspected on the right side. The right lower quadrant should be palpated last. The point of greatest muscular rigidity would naturally be over the site of the inflamed appendix, wherever it may lie. Now, as the degree of pressure is gradually and gently increased so as to reach deeper in the abdomen, the point of maximum tenderness will stand out distinctly. Sometimes in children with a thin abdominal wall the rigid inflamed appendix may be palpable, especially under the relaxation of an anesthetic. In other patients deep palpation may reveal a definite mass, which usually means that the appendix is wrapped in the omentum, with or

without an abscess. The findings which are revealed by careful palpation will naturally vary with the location of the appendix, and I will refer to this point later on. Before leaving the subject of palpation, I would warn you not to accept your findings unless you are sure that the bladder is empty. I have seen a full bladder give signs of muscular rigidity and tenderness which disappeared after urination.

A rectal examination is a valuable diagnostic aid and should always be made. In sensitive patients a light anesthesia may be required to permit bimanual palpation. Such an examination will often reveal a deep-seated mass in the pelvis or right iliac fossa. It may even show a pelvic abscess pushing into the rectum.

As I have stated, in some patients the appendix will lie in a retrocecal position under the peritoneum along the posterior abdominal wall. Such patients will often complain of pain in the loin and exhibit tenderness and muscular rigidity in that region. As the ileopsoas muscle lies in close proximity to the inflamed appendix, it may become tonically contracted resulting in painful flexion and immobility of the right hip.

Again, in other patients where the appendix through failure of rotation of the colon, lies up under the liver, the pain, tenderness and rigidity will be localized in the region of the gall-bladder. Vomiting is usually marked in these patients and jaundice is frequently present. The respirations may be increased and grunting in character, simulating a diaphragmatic pleurisy.

In still another group of patients the appendix may lie attached to the surface of the mesentery of the terminal ileum, and is spoken of as a mesenteric appendix. These patients exhibit very early the signs of intestinal obstruction, such as vomiting, obstipation and later distention. If an abscess occurs it will rupture between the leaves of the mesentery with a resulting chill and severe toxic symptoms.

Where the appendix lies over the brim of the pelvis low in the abdomen, the pain and tenderness are usually found near the crest of the pubis. As it is close to the bladder and rectum, urination may be frequent and painful and the urine may contain pus due to irritation of the ureter; diarrhea also may be present. If an abscess forms it may spread to the left side of the abdomen, as the tip of the appendix may lie over on the left side of the attachment of the mesentery. In those rare cases where the appendix is situated in the left iliac fossa, due to the failure of rotation, the signs will all point to the lower left side of the abdomen instead of the right.

The laboratory offers some aid in clearing up the clinical picture. A leukocyte count will show that the white corpuscles are increased usually up to 15,000. It must not be forgotten, however, that in many cases the white count may not run over 8,000 or 9,000, and such a finding should never rule out a diagnosis of appendicitis in a probable case. The leukocyte count is probably most important when it shows a leukopenia for then our attention is directed toward such conditions as typhoid fever and measles. Urine analysis may show the presence of pus, sugar or acetone. Such findings should, of course, be given proper consideration.

To make a diagnosis of appendicitis in children it is necessary to keep in mind the probability of such a condition arising in the abdomen, even in infancy. The clinical picture unfolds itself as pain, vomiting, tenderness and fever, usually in that order, just as in adults. The local findings on physical examination will usually settle the diagnosis if the examiner will use his skill to find them. We do not have to consider many conditions resembling appendicitis which are found in adults. Unfortunately, however, there are a number of conditions simulating appendicitis which occur in children. It is necessary, therefore, to be on the alert in making a differential diagnosis.

In girls we must remember the frequent occurrence of acute pyelitis. Pain and tenderness are often localized in the right lower quadrant of the abdomen and there may be slight muscular rigidity. The onset, however, of this trouble is often marked by a definite chill which rarely occurs in appendicitis. The temperature also is quite high, usually about 104, whereas in appendicitis it rarely goes above 102.5. The diagnosis, of course, is usually settled by a urinary examination. In cases of pyelitis a drop of uncentrifuged urine will show many pus cells and motile organisms. At times there will be some difficulty in making a definite decision between pyelitis and appendicitis. I have already referred to the retrocecal and pelvic types where the appendix lies in close proximity to the ureter or bladder. Such patients may show considerable pus in the urine. In doubtful cases of that kind, if the other findings point rather definitely toward appendicitis, I feel that it is always wiser to accept a diagnosis of appendicitis and act accordingly.

A necessary point to be kept in mind is the frequency of referred pain in children. This occurs particularly in conditions which may arise in the lower chest, such as pleurisy, pneumonia or pericarditis. These morbid conditions very often give a clinical picture resembling appendicitis, especially if the appendix is situated high up under the liver. The temperature, however, is usually quite

high right from the beginning, and the pulse and respiratory ratio is much more advanced than in appendicitis. If a complete physical examination has been made of the child, which should, of course, be done in every instance, dullness, rales or a friction rub will usually give a definite clue to the diagnosis. The leukocyte count, too, is usually much higher and ranges from 25,000 to 40,000. In doubtful cases an x-ray film of the chest will often show the presence of an early pneumonia.

Children are very susceptible to infections in the nose, throat and upper respiratory passages. Such patients frequently complain of abdominal pain, which may suggest appendicitis rather strongly. My associate, Dr. Brennemann, has noted that these abdominal symptoms are seen most often in certain epidemics of upper respiratory infections. These patients do not exhibit much abdominal rigidity although their abdomens may be somewhat tender. If the child is coming down with measles, the presence of Koplik's spots accompanied by a leukopenia will settle the question. In all other cases the examiner should remember the possibility of a secondary involvement of the appendix whenever there is a throat infection, and repeated abdominal examinations are necessary to safely rule out appendicitis.

One of the most serious errors of diagnosis in children is to mistake for appendicitis the vomiting and abdominal distress which go with acidosis, whether from diabetes or other causes. The patient may look quite ill and vomit repeatedly. Due to retching, the abdomen becomes tender and may be slightly rigid, but usually there are no localizing signs. The breath often has an acetone odor and diacetic acid will be found in the urine. Here again, a urine analysis will settle the diagnosis and probably prevent a fatality which may occur if these toxic children are subjected to an operation and an anesthetic.

Probably the most difficult thing to differentiate from appendicitis is the mesenteric lymphadenitis which is seen quite frequently in children. Occasionally in thin-walled individuals these masses of glands may be palpated, especially if an anesthetic has been given. In most cases, however, I must confess that I have found it impossible to differentiate between this condition and appendicitis. Laparotomy does not seem to injure these patients and clears the diagnosis. Here again, I feel that it is wise to err on the side of removing a normal appendix rather than to overlook one that is inflamed.

Strange as it may seem an early peritonitis due to the pneumococcus, streptococcus or gonococcus may simulate appendicitis. These patients exhibit abdominal pain and tenderness, especially over the lower half of the abdomen and particularly the pelvis. Tenderness is present but is usually not localized to any one point. The pneumococcus cases occur exclusively in girls. Streptococcus patients are extremely sick and usually give a history of a preceding throat infection. In general these peritonitis patients are more toxic with a higher pulse and temperature range than those with early appendicitis.

In infants intussusception is more frequent than appendicitis. The children have abdominal distress but usually no tenderness or rigidity. Very frequently the intussuscepted mass may be palpated and in all cases blood is present in the stools.

Although typhoid fever occurs very rarely still it must always be kept in mind, as its onset may be similar to that of appendicitis, with pain, vomiting, abdominal tenderness and rigidity in the right lower quadrant. A careful history of the onset of trouble in these patients will show that fever has preceded the pain by a day or two, whereas in appendicitis pain comes on first. In addition a blood examination will show a leukopenia.

Osteomyelitis of the femur or ileum, and arthritis of the hip will usually show marked fixation of the hip joint with localized tenderness over the bone. The ileum may be palpated by rectal examination, and will sometimes show an abscess spreading up the inner side of the bone from the acetabulum. Inflammatory lesions of Meckel's diverticulum may resemble appendicitis in every particular, as we can readily imagine from the similarity in anatomy. In the patients that I have seen with this lesion the pain and tenderness was located at or possibly slightly to the left of the umbilicus.

Tuberculosis of the spine in children may frequently simulate appendicitis if the collapsing bodies of the vertebrae press on the nerve roots, producing pain, tenderness and some muscle fixation. It is one of the conditions which is usually easy to differentiate, however, if it is only kept in mind, and a careful examination made of the spine. In rare instances we may have to differentiate mesenteric cysts, volvulus, salpingitis, coxalgia, torsion of the omentum, purpuric colic and twisted pedicles of ovarian cysts, from appendicitis. From the rather lengthy list it is evident that a positive diagnosis of appendicitis may be made only after a careful physical examination and due consideration of the laboratory findings.

When we come to consider the outlook in a given case of appendicitis, many factors will have to be evaluated in reaching a conclusion. To begin with, the age of the child is important for reasons

that we have already given, and it can probably be said in general the younger the child the poorer is the outlook. In infancy, unfortunately, the diagnosis is frequently not made until after death. The mortality is highest during the first four years of life as the resistance of young children to septic infection is not very great. Another factor of considerable importance is the time at which the diagnosis is made. By that I mean that in children as in adults we may say that the earlier the diagnosis is made the better is the outlook, as treatment may be instituted before gangrene, peritonitis and other serious conditions have arisen.

The position of the appendix anatomically is of definite importance in regard to the prognosis. The retrocecal appendix is in relation to the retroperitoneal tissue and so may produce a spreading infection in that area that may lead to a rapid fatality. The mesenteric appendix is particularly bad as it frequently causes an intestinal obstruction. The high lying appendix up under the liver is difficult to reach and is apt to be associated with pulmonary pathology. When the appendix is located in the normal position or in the pelvis, the prognosis is probably the best.

Naturally the type of infection must be considered, and it is very certain that a streptococcus infection offers a most serious prognosis. A spreading peritonitis frequently ensues and proves fatal. The virulence of the organism is a factor, for the more rapidly it spreads through the tissues and reaches the peritoneum, the more unfavorable the situation becomes.

Finally but most emphatically, I wish to call your attention to the one factor in children which seems to me as important as any in raising the mortality of this disease. I refer to the practice of giving cathartics to children who complain of abdominal pain. I can safely say that most of the cases that I have lost have been given good, liberal doses of castor oil or some other cathartic before any doctor was called. My experience has made me feel a sense of moral obligation urging me to do all that I can to stop this practice. I think that each one of us should emphatically advise and instruct parents to avoid giving cathartics to these little people when they have an abdominal pain and to allow a physician to see them as soon as possible. If they must do something a small enema of warm water is the safest and most effective remedy to use.

To speak of the treatment of appendicitis would seem to be harping on a time-worn subject, but after considerable experience with this disease, I feel that it is not all so simple. On the other hand, I must confess my inability to state clearly just what factors make up the surgical judgment in the individual case. In general, we may say that surgery offers the safest and most satisfactory form of treatment, and further, that the sooner the operation is performed the better is the outlook for recovery. In the early case it will probably be possible to remove an intact appendix before perforation with abscess formation or peritonitis has occurred. One point calls for emphasis. Chills, sudden cessation of pain and fall of temperature are indications of gangrene and rupture and call for immediate operation. In children I feel that the McBurney's gridiron incision should be used in practically every instance, but the incision should always be located over the point of maximum tenderness wherever it may be, as that is the best guiding point for the inflamed appendix. The technic used is so well known that I will not take it up at this time.

In some patients where an abscess mass can be palpated, the peritoneum should be opened very carefully, the abdominal wall lifted up and the abscess mass walled off by gauze pads from the rest of the peritoneal cavity, before it is opened. After mopping away the pus the appendix should be removed if it can be done without breaking down the protecting wall of the abscess cavity. It may not be possible or even necessary to invert the stump. Ligation with a good heavy catgut ligature is all that is necessary. Cigarette drains should then be placed so as to drain the abscess cavity and the abdominal wound closed very loosely. In those cases in which it is thought best to leave the appendix, subsequent removal should be done as soon as the wound is well healed and the infection removed. In the unfortunate cases where peritonitis has already set in, the decision as to what should be done is not so easy to make. I would suggest that if the patient has a diffuse, well-established peritonitis, when first seen, it will probably be better to delay operation and attempt to change the diffuse condition to one that is more circumscribed. Such patients should be placed in the Fowler position with large, hot fomentations over the abdomen. Proper rest can be obtained by the use of morphine. Nothing should be taken by mouth but sufficient fluid should be given by proctoclysis or under the skin. Under this treatment a very toxic patient who might succumb if subjected to the ordeal of an operation may after twenty-four or forty-eight hours show a marked general improvement with a more localized condition in the abdomen. He can then be operated on with a far greater degree of safety.

Other patients who show a peritonitis, especially in the early stages, should be operated on at once. The appendix is removed through the usual muscle-splitting incision and a cigarette drain is

placed in the pelvis through the stab wound just above the pubis. Similar drains are inserted in the right kidney pouch and right iliac fossa and brought out through the original incision. In certain cases it may be wise to place a cigarette drain in the left flank through a stab wound in the loin. Large, hot fomentations are then applied to the abdomen. The patient is put to bed in the Fowler position, and the usual measures are employed to combat peritonitis.

122 S. Michigan Ave.

THE INCIDENCE OF SYPHILIS IN A GENERAL PRACTICE

ELI GRIMES, M.D., Des Moines

The prevalence of syphilis has received a great deal of investigation, especially since the World War. The different strata of race, of society and of occupation have been studied with a wide variation in results. In European countries the estimate is placed higher than in America. In Berlin and Vienna it ranges from fifteen to twenty per cent of the general population. In London it is placed almost as high. It is stated that in Glasgow, twelve per cent of all children born show evidence of congenital syphilis. Hazen, and more recently Stokes, from published statistics and from their own work, conclude that ten per cent of the total population of America is syphilitic. If we study the data on which these estimates are based, however, we are forced to the conclusion that the number of cases studied is too small, or the class too limited to apply to the population as a whole. A survey still remains to be made which will indicate with some degree of accuracy the incidence of this disease in the general population.

In compiling statistics it is evident that the number of cases found will depend upon two factors, the prevalence of the disease and the accuracy of the survey. Accurate statistics are dependent upon accurate diagnosis. Diagnosis is, therefore, the important factor.

If the Wassermann blood test alone is used as a standard, at least forty per cent of the cases will be missed. When the Wassermann test is used in conjunction with clinical analysis, the number of cases found is higher.

Postmortem examination, as usually conducted, gives still higher results, while postmortem examination with microscopic studies gives the highest incidence.

The present study was based upon clinical analysis, including the Wassermann test.

Fifteen thousand individuals, coming under the writer's observation over a period of sixteen years, were intensively studied for the presence of syphilis. These individuals were representative of the entire state of Iowa. No factory workers, coal miners, or unskilled laborers were included in the survey, nor any free clinic cases. The class of patients included merchants, professional men, teachers, office workers and farmers; occupations of the well educated people and their families.

Every patient, regardless of symptoms or the nature of his complaint, was carefully examined for any indication of syphilis. A positive diagnosis was made in 674 cases, or 4½ per cent. A Wassermann blood test was made in each individual, and when there was the slightest evidence of syphilis, in history or condition, a series of Wassermann tests were made if the first was negative. Of the 674 cases positively diagnosed, 370, or approximately 54 per cent, were Wassermann-positive on the first test, and 304, or 46 per cent were negative. That most of the cases proved to be syphilitic were past forty years of age accounts for the high percentage of negative results. The following tabular analysis of age groups of the positive reactors in this series will confirm the well known fact that the older the individuals, the greater the incidence of negative blood:

20 to 30 years	90 per cent positive
30 to 40 years	70 per cent positive
40 to 50 years	60 per cent positive
50 to 60 years	25 per cent positive
Over 60 years	15 per cent positive

Before discussing other methods of diagnosis, a detailed evaluation of the Wassermann blood reaction should be made.

In patients with a primary lesion, the Wassermann reaction was positive in 20 per cent and negative in 80 per cent during the first week; positive in 60 per cent and negative in 40 per cent during the second week; positive in 80 per cent and negative in 20 per cent during the third and fourth weeks, and positive in 90 per cent and negative in 10 per cent during the fifth week.

In the presence of early skin lesions, the reaction was positive in 98 per cent and negative in two per cent. It should be noted that as usually determined, only 15 per cent of patients with syphilis have early skin lesions.

In those male patients with late cutaneous lesions, the reaction was positive in 70 per cent and negative in 30 per cent. In women who had borne children or suffered miscarriages, it was positive in 40 per cent and negative in 60 per cent. Pregnancy obliterates the signs of the disease, even the blood reaction.

Forty per cent of the patients with gastro-intestinal syphilitic symptoms had positive blood reactions, while 60 per cent had negative. In gastro-

intestinal syphilitic disease, the reaction was positive in 100 per cent of the cases.

Neurosyphilis as a whole showed a positive reaction in less than 30 per cent.

In tabetic crisis, Charot's joint and trophic ulcers, the blood is negative as a rule. It is likewise negative in non-paretic psychosis, syphilitic epilepsy, gumma of the brain, spastic paraplegia and brain palsies.

In the cases of heredosyphilis, less than 40 per cent were positive at birth, while the reaction was positive in less than 40 per cent of the parents.

In syphilis of twenty-five or more years' standing, the blood was positive in only 30 per cent of the cases. The majority of cases of long standing without clinical evidence have negative reactions as a rule, but these patients may later go to a cardiovascular or neuropathic death.

The incidence of a positive Wassermann test is the highest in those cases in which it is not required to establish a diagnosis. In those where it would be of the greatest diagnostic value, it is apt to be negative.

Since laboratory methods, then, are not more than 55 per cent accurate, the diagnosis must be made by clinical analysis.

Pathognomonic symptoms and lesions, like the Wassermann reaction, are lacking in a great majority of cases. A skin lesion is sometimes as indicative as a positive Wassermann. Symptoms may reveal the condition, as in advanced typical tabes, but such cases are rare. The diagnosis in most cases depends upon the classification and analysis of all the available data.

For a number of years a routine diagnostic scheme has been followed in studying the cases coming under the writer's observation. This scheme consists in grouping all data under four heads: (1) symptoms, (2) signs, (3) indications and (4) evidence.

(This is a modification of Dr. Stokes' scheme of symptoms, signs, and collateral evidence.)

Symptoms.

The chief complaint of the individual seeking relief must be noted carefully. The patient must then be cross-examined for symptoms other than those referable to his chief complaint. A symptom disregarded by the patient is often the most valuable clue. For instance, when paroxysmal pain in the upper adbomen is the chief complaint and questioning brings out the fact that there is delay or trouble in emptying the bladder, tabes is immediately suggested. Pain in the substernal region of an effort type is much more significant of aortitis when there is an increasing shortness of breath, even though it be slight.

Signs.

Signs are the physical manifestations of the lesion that gives rise to the symptoms. In the case of substernal pain an aortic murmur would constitute a sign, and in the case of lancinating pain, the absence of normal reflexes would point to cord disease. Signs, then, as used in this sense, do not point to syphilis in general, but to those lesions which give rise to the symptoms.

Indications.

Indications are the physical clues that point to the presence of the disease. In the case of substernal pain, the presence of a perforated nasal septum would be an indication, while in the case of lancinating pain, the presence of a penile scar or of an aortic lesion would be an indication.

Evidence.

Evidence consists of the facts gained from the clinical, femilial, marital and sociologic history. Evidence so gained is as important as are signs and indications. The history of venereal disease is evidence of major importance. In the case of substernal pain, the history of unsuccessful pregnancies in the wife would be strong evidence. In the case of lancinating pain, interstitial keratitis in a daughter would be positive evidence.

In many cases the data are insufficient to make a diagnosis until a complete syphilologic survey is made of the husband or wife and children. This survey must include not only a Wassermann test, but a search for indications, and for evidence in the present condition and clinical history.

A woman twenty-nine years of age recently came under observation. Her chief complaint was general weakness. One year ago she gave birth at term to a child that died when five days old. The attending physician made a Wassermann test of the blood of the mother and also of the child. Both were negative. He assured the mother that syphilis was not a factor and dismissed the case. Had he examined the husband, he would have found typical cutaneous lesions and a positive Wassermann reaction.

The diagnosis must be based on at least three positive factors in the diagnostic scheme. Symptoms, signs, indications and evidence must all be considered. When but two of these are positive, the third frequently requires the most exhaustive survey. This survey includes the therapeutic test.

To further illustrate this diagnostic scheme, the following table has been constructed, showing five cases with positive diagnosis, each falling in a different group:

Case	1	2	3	4	5
Symptoms	+	+	+	0	+
Signs	+	+	0	+	+
Indications	+	0	+	+	+
Evidence	0	+	+	+	+

To emphasize the value of grouping the data into symptoms, signs, indications and evidence, the following five cases are reviewed:

Case I. A man aged forty-two years, an office worker, was married at thirty. His wife was living in good health; they had no children. His family history and medical and surgical history were negative.

Present condition: he registered for physical examination on general principles. He claimed to be perfectly well, worked hard and was an expert golfer. The general examination made in such cases consists of blood examination, including the Wassermann test, urinalysis, kidney function tests, X-ray of the chest and a general physical survey with the patient completely undressed for thorough inspection. A full time systolic aortic murmur was discovered, and when placed on his left side, a short diastolic murmur was audible. The blood pressure was 140/60. The blood was negative.

Here, then, were positive signs and negative symptoms.

The next step was to look for indications. He had definite leukoplakia of the commissura of the mouth and a crescent-shaped scar in the right scapular region, of which he was unaware.

These findings constituted positive indications and were the only ones found.

No positive evidence could at first be developed. He had had gonorrhea at eighteen and was married at thirty; his wife was never pregnant. Neither himself nor his wife had experienced any sickness which could be translated in terms of syphilis. The blood Wassermann of his wife was four-plus, which is to be regarded as positive evidence.

The case then presented negative symptoms, positive signs, positive indications and positive evidence.

The patient was placed on intensive treatment, a procedure considered safe in the absence of coronary symptoms. He developed dyspnea for the first time, was put at absolute rest for three weeks and suffered no further inconvenience. The treatment was carried out with no unusual variations. He has been under observation for four years and is in perfect functional health. The aortic murmur is shorter and has a more metallic ring. In this case, due to a Herxheimer reaction in the aortic valves, the treatment developed positive symptoms which at first were lacking.

Case II. The second patient was a widow, aged fifty, whose husband had died of pneumonia ten years before. The family and clinical history were negative. She married at eighteen and had one child, living in good health. Childbirth was uneventful and she had had no miscarriages. Menopause occurred at forty-eight without discomfort. She was an office worker, filling an important position with a substantial salary. Her dietary habits were correct and she was an enthusiastic equestrienne.

Present condition: the patient had hot flashes for one year. During the three months prior to examination they had grown progressively worse, so that she found it difficult to continue work. For two months the flashes had caused such an extreme sense of suffocation that if she were walking she would have to sit down until the paroxysm passed off.

Physical examination was negative except that the blood pressure was 180/90.

Cross examination: You were eighteen when you married; how old was your husband? Twenty-four.

How long after marrying was your child born? Ten years.

Was this long period of sterility intentional? No.

Before pregnancy did you have irregular flowing, or suspect that you were pregnant when you were not? No.

Your husband died of pneumonia; did he use alcohol? No.

Was he in good health up to the time he contracted pneumonia? No. Two years before he died he had a stroke and was unable to work afterward.

Did any other members of your husband's family have a stroke or high blood pressure? No, he was the youngest of four children, all boys, and I know positively that none has high blood pressure. His parents died at advanced age.

Why do you call these attacks hot flashes? All my friends and two physicians have called them that.

When are the attacks most severe? When at work. I used to walk to the office, but of late am unable to do so. The attacks come on and I have to sit down.

Do they come on while resting? Only rarely; they have come on at night, awakening me from sleep.

How long after the menopause did the attacks begin? About one year.

Is there a pain associated with these attacks? Yes, a dull pain in the center of the chest before I become short of breath.

Analysis: A woman of fifty had dyspnea on effort with occasional paroxysmal dyspnea at night.

The symptoms pointed to cardiovascular syphilis.

The signs were negative, as determined by physical and X-ray examination.

The only indications were typical leukodermic spots over the posterior neck and shoulder. The blood was negative.

Evidence included a ten-year period of sterility, and the fact that her husband, although not of a hypertensive family, had a stroke at forty-two. The latter is strong evidence of syphilis.

Diagnosis: Cardiovascular syphilis, based on positive symptoms, positive indications and positive evidence. This diagnosis was justifiable, with negative signs and the other three factors positive.

Treatment was begun cautiously because of symptoms of coronary involvement. At the end of three months all symptoms were gone and the patient was in perfect functional health. A slight aortic mur-

mur developed, constituting a positive sign. The blood Wassermann became positive.

Case III. A locomotive engineer, aged forty-five, was a widower by decision of court. The family history and medical and surgical history were negative.

Present condition: Four years before examination the patient began to have pain in the lumbar spine. This was worse when he was tired and was often severe at night. He was forced to take a number of vacations, during which he experienced only partial relief. Two years later his tonsils and many teeth were removed, but he showed no improvement. Spinal arthritis was considered, but was ruled out by the X-ray, since spinal arthritis of four years' standing would of course show on an X-ray plate.

Because of negative findings, and the absence of the usual causes of backache, lues was considered.

A search for indications revealed a large perforation of the nasal septum. He did not know what had caused it or when it had happened. This was a positive indication. The blood Wassermann test was negative.

Cross examination brought out the fact that he married at thirty and his wife left him six months later because of a venereal disease, the nature of which he did not know. If the disease had been gonorrhea it would have caused trouble before six months and it therefore must have been syphilis. There was no penile scar.

The case then presented positive symptoms, negative signs, positive indications and positive evidence.

Diagnosis: Vascular lues. The results of treatment confirmed the diagnosis.

Case IV. A farmer, aged forty-five, with negative clinical and family history, was married at thirty-five and had three healthy children. His wife had had no miscarriages.

Present condition: One year before examination the patient developed a persistent cough and later the sputum became streaked with blood. A diagnosis of tuberculosis had been made and he was preparing to enter a sanitarium. His chief complaints were persistent cough and loss of strength.

Examination was generally negative. The lungs showed diminished resonance with prolonged expiration in the lower right. X-ray examination showed opacity at the root of the lower right lung, with an extensive fibrosis extending to the periphery and diaphragm.

Symptoms and signs were therefore positive for syphilis of the lung. No indications could be discovered. The Wassermann test was negative. No evidence could be developed until examination of the children, when it was found that the older one had typical Hutchinson's teeth.

The case then presented positive symptoms, positive signs, negative indications and positive evidence.

Case V. A woman aged sixty-two was married, and her husband was living and well. Menstruation began at fourteen and was regular and normal. She had two pregnancies, no miscarriages and uneventful menopause at forty-eight. Her two children were living in good health. She was married for ten years before the first child was born. Childbirth was uneventful. Medical and surgical history revealed no serious illness until the age of fifty-eight, when she was treated for pernicious anemia. This proved to be a mistaken diagnosis. One year later a diagnosis of ileocecal cancer was made and she underwent an extensive operation. She did not know what the postoperative diagnosis was, but was informed that it was not cancer. She remained in poor health of indefinite kind; her chief complaint was weakness.

Blood examination, including Wassermann test, was negative. Her blood pressure was 160/100. The heart tone was normal except for an accentuated aortic flap. When she was placed on her left side, however, with the right shoulder well forward, a sharp systolic murmur was audible, heard best to the left of the sternum. Examination of the cutaneous system revealed a crescent-shaped scar on the internal aspect of the left leg at the junction of the middle with the lower third, which she said was the result of a varicose ulcer ten years before.

The case then presented the following points for analysis:

Weakness of this type might be due to anemia, renal disease or circulatory failure. Anemia and renal disease were ruled out, and it therefore must be due to circulatory embarrassment. The aorta presented positive sings to confirm this. The aortic lesion might be due to rheumatism, or hypertension or lues. She had never suffered from rheumatism or other infection. Her blood pressure had always been normal. The scar on the leg was not in a location where varicose ulcers occur. The scar was crescent-shaped and a varicose ulcer leaves an irregular scar. This one was thin, typical of syphilis. That she was not pregnant for ten years after marrying, that she had an anemia of an unexplained kind, that she was operated on for obscure growth which proved not to be cancer, all constituted evidence of syphilis.

The diagnosis of cardiovascular syphilis was based on positive symptoms, positive signs, positive indications and positive evidence. Treatment proved the correctness of the diagnosis.

HISTORY OF VENEREAL INFECTION

Of the entire series of cases studied, only four per cent had previously been treated for syphilis. Twelve per cent admitted having had a visible ulcer, which had been diagnosed as non-syphilitic. Seventy per cent gave a history of gonorrhea.

That syphilis goes on for years with no clinical signs is evidenced by a summary of the age incidence:

20 to 30 years	10 per cent
30 to 40 years	15 per cent
40 to 50 years	35 per cent
50 to 60 years	30 per cent
Over 60 years	10 per cent

It should be noted that only twenty-five per cent of the patients were under forty years of age.

Twenty cases of late heredosyphilis are not included in this table.

SYMPTOM GROUPS

The chief symptoms for which relief was sought included almost every conceivable discomfort. More than fifty per cent, however, fell within six groups:

Pain in the chest	84
Indigestion	78
Weakness	60
Shortness of breath	60
Headache	40
Nervousness	36

The following complaints occurred ten or more times:

Backache.
Miscarriages
Rheumatic pains.
Epigastric pain.
Failing vision.
Defective hearing.
Cough.
Sterility.
Skin lesion.
Delayed convalescence.

The most frequent symptom was pain in the chest. Since this is the chief complaint in so many different conditions, it is interesting to note that of 800 patients with pain in the chest as the leading symptoms, in 360 it was due to acute infections, such as influenza, bronchitis and tonsilitis. Excluding these there remained 440 with persistent pain in the chest as the chief complaint, of which 84, or 20 per cent, were due to syphilis. Sixty of these were men and 24 women.

Stomach trouble was the presenting symptom in 78 cases. Every disease to which the flesh of man is heir may have indigestion as a symptom. In this group there were but four who had syphilis of the digestive tract, one of the stomach and three of the liver.

Weakness was the leading symptom in 60. Next to pain, weakness is the most common condition that sends a patient to the physician. Excluding those cases in which it was due to habits of life, such as faulty diet or over-work, it was found to be due to organic disease in 252 cases, of which 60, or 25 per cent, were syphilitic.

Dyspnea occurred 60 times. An analysis of this symptom shows that it is usually due to acute infections, excitement, or physiologic exertion beyond the individual's normal limit. When these causes are not present it is due to heart or kidney disease in the majority of cases. Cardiovascular lues was present in 60 of this group.

Headache occurred 40 times, representing about two per cent of the total number of cases with this complaint. A syphilitic headache has no diagnostic characteristic.

Nervousness was the chief complaint in 36 cases. Such a variety of sensory disturbances was called nervousness by the patients, that the symptom did not admit of analysis except in a few cases of actual exhaustion to a point of disability. Eight of the 36 had been treated for nervous exhaustion.

Rheumatism was the chief complaint in 20 cases. Almost every kind of pain is called rheumatism by the patient. When the natural history of the pain is obtained, it is found that it may be anything from flat feet to gastric crisis. Of the 20 who claimed to have rheumatism, two had symmetrical hydro-arthrosis of syphilis, which is not painful, three had gumma of the tibia, six lancinating pain of tabes, seven syphilitic aortitis causing pain in the shoulder and arm, two were due to sciatic neuritis which promptly disappeared under treatment.

Delayed convalescence and post-infectious exhaustion constitute an important chapter in medical practice. Syphilis as a cause has not been sufficiently considered. When a patient does not recover from an injury according to rule, the physician should look for syphilis. This is particularly important in cases of injury involving bony and articular structures. Syphilis is present in the majority of cases of this type when there is a flare-up of pain and swelling without apparent cause. Acute infections activate a quiescent syphilis. When convalescence is delayed, or exhaustion persists in the presence of normal heart and kidneys, syphilis or tuberculosis is frequently the cause. Of the twenty cases presenting delayed convalescence, four were traumatic and sixteen infectious.

ASYMPTOMATIC GROUP

Of a group of seventy cases classified as asymptomatic, sixty were discovered by routine Wassermann tests and ten during the course of health examinations. The clinical manifestations of syphilis were lacking in those discovered by Wassermann tests; all were found in definitely non-syphilitic conditions, such as lobar pneumonia, influenza, uterine fibroids, traumatism, etc. In the ten patients supposedly in perfect health, in whom syphilis was revealed by health examination, the indication was found in aortic lesions, perforated nasal septum mucous, or cutaneous lesions, or a positive Wassermann.

To the asymptomatic group should be added twenty-four cases in which the symptoms were incorrectly diagnosed as syphilis because of a positive Wassermann. Treatment proved that they

were not due to the syphilis, which was asymptomatic. Headache, backache, stomach trouble, weakness, nervousness and neuralgic pains made up the symptoms of this group.

Treatment brings forth the final evidence that symptoms are due to syphilis. In many cases therapy is necessary to establish the third positive factor required in the diagnostic scheme. In a case of general weakness with no signs, a cutaneous lesion as the only indication, and no evidence elicited, two positive factors are present, symptoms and indications. The third, evidence, is required. When treatment is followed by immediate improvement of symptoms and the skin lesion undergoes prompt resolution, the case then presents positive symptoms. The skin lesion is shown to be a positive indication, while the improvement constitutes positive evidence.

TYPE OF INVOLVEMENT

In the definite types of involvement, cardiovascular of the aortic type was by far the most frequent. It was the cause of the clinical manifestations in 165 cases, or 25 per cent. To these should be added 42 cases in which it was found associated with other clinical types of the disease. One hundred twenty-four cases were clinically neurosyphilis, of which 60 were tabes and 22 of these had cardiovascular signs. Involvement of the skin and mucous membrane was present in 80, of the lymphatics in 30, of the bones and joints in 45, of the liver and spleen in three, and of the stomach in one.

In 270 cases no special involvement of any one organ or system could be demonstrated. This group, which made up more than one-third of the total number of cases, was composed of those whose chief complaint was of a general nature, such as weakness, nervousness, insomnia, or delayed convalescence, but indigestion, headache, impotency and miscarriages fell mostly in this group. The term "general ill health" stands high among the symptoms of syphilis.

It cannot be too strongly emphasized that cardiovascular disease in the vast majority of individuals between the ages of 40 and 60 is, in reality syphilis. Syphilis stands high as the cause of uremic death. It is the direct or indirect cause of 40 per cent of angina pectoris. In a series of 60 angina cases studied by the writer, syphilis was present in 40.

The opinion of a specialist is sometimes required by the general practitioner in making a diagnosis of syphilis. Such instances, however, are rare.

A general practitioner is not a dermatologist, and if he turns to text on this subject for help he is lost in a maze of descriptions and tables of differential diagnosis which he can never hope to master. There are only two kinds of skin lesions: those that are syphilitic and those that are not. Most syphilitic skin lesions have common characteristics by which they can be recognized. If a lesion is not luetic, its diagnosis is a different matter and is foreign to the question in hand, but most practitioners are of necessity familiar with the common non-syphilitic skin lesions. A number of syphilitic skin lesions, however, are not characteristic, and these must be studied in connection with other indications and evidences, remembering that the arsenicals are delusive therapeutic tests in skin diseases. Excluding acne and urticaria, 90 per cent of non-syphilitic skin lesions in this series were the following, named in the order of frequency: dermatitis, of the eczematous type, trichophytosis, purpura, psoriasis, varicose ulcer and skin cancer of various types.

The position of the general practitioner in regard to nerve lesions is the same as in skin lesions. He is not a neurologist. There is no excuse for his diagnosing third nerve paralysis as Bell's palsy, however, or for making this diagnosis without determining the etiologic factor. Tabes is in the realm of the general practitioner, and it is unpardonable for him to consider upper abdominal pain as a surgical condition without full investigation, or to call a dribbling bladder cystitis. He must be familiar with tabes and all its multiform manifestations. The most pathetic cases in this series were those of tabes and syphilitic aortitis that had been under a physician's care for years and the true nature of the trouble not recognized, perhaps not because the physician was not familiar with these conditions, but because he did not look for them.

This report is made by one who is not a dermatologist or neurologist, nor yet a syphilologist. These astute specialists will find herein nothing of interest but its imperfections. The writer has only the excuse that it is a report of part of the work occurring in a busy general practice. It is work done with simple tools in an effort to serve his patients by recognizing syphilis while it is still amenable to treatment.

COMMENT AND CONCLUSION

Fifteen thousand individuals have been studied for the presence of syphilis. A positive diagnosis was made in 674 cases, or four and one-half per cent.

When it is taken into consideration that syphilis has a long period of latency during which it is beyond recognition, it is reasonable to conclude that

the incidence is much higher. Six per cent would be a conservative estimate.

There is no means of translating these figures into statistics that would represent the population as a whole. They apply only to a definite group of patients who consulted a particular physician.

This report is addressed to the general practitioner, in the hope of inspiring him to a closer search for this disease. It is to him that the afflicted come first; he is in the first line of relief. Many more sufferers can be discovered while treatment may still be efficacious; many are not discovered because of the inadequacy of present methods. It must be kept in mind that the death toll from syphilis during the active period of life is greater than from any other one disease.

THE OBSTRUCTING PROSTATE*

WILLIAM R. HORNADAY, M.D., Des Moines

There are many types of prostatic obstruction, and each is at times of such significance that active and prompt measures of relief must be resorted to in order to reestablish urinary drainage, either artificially or through the normal channel. This is true particularly if the obstruction is of high degree and of brief duration. The associated factor of infection involving either the urinary or genital tract is an added condition which complicates the picture and is of utmost importance to the medical attendant, whose aim it is to provide relief and to prevent complications which at times occur. On the other hand, if a recent infection does not exist, and the obstruction is small and of gradual onset, the body mechanism readjusts itself in a remarkable manner to counteract interference with the urinary flow, and the span of life is thereby prolonged. Clinically, this rule is seen to apply when obstruction is present anywhere, from the glomerulus within the renal cortex, to the external urethral opening. That is, the site or location of the lesion is not so important as the systemic accommodation to it.

Our consideration deals with various types of obstruction as they pertain to the prostate gland. Differentiation of these types, and brief reference to their management is the central purpose in mind. A clinical or working classification, which I do not claim as original, is recognized in the following:

1. Acute inflammatory obstruction, a common example of which is seen in acute prostatitis, which may or may not be specific in origin and in abscess formation.

2. The chronic inflammatory prostate which includes the so-called median bar obstruction, prostatic fibrosis and a type of obstruction oftentimes referred to as the small contracted prostate.

3. Hyperplastic or benign hypertrophy, commonly referred to as adenomatous enlargement.

4. Neoplastic, or prostatic cancer, generally believed to occur independently of the types mentioned, especially of types two and three.

Acute inflammatory type: This is a picture not infrequently observed in a rapid and severe extension of a virulent Neisserian infection into the posterior urethra, of which the prostate is an associated anatomic structure. Instances are rarely seen where the streptococcus or staphylococcus is the exciting agent which makes its invasion by way of the blood stream. Acute inflammatory changes, as congestion and edema, account for the obstruction to the urinary flow. The urethral canal is moderately constricted as a part of the picture, and rectally it is found that the prostate is enlarged, with a tense capsule, and the gland is sensitive and very painful. Regardless of the extent of the obstruction present, discontinuation of all local treatment is urged, since such treatment oftentimes is an antecedent factor in case of specific infection. Complete bed rest is indicated, and application of heat in one form or another is a part of the routine; hot sitz baths, hot water retention enemas and diathermy are of invaluable aid. There is one point I wish to emphasize in the care of patients suffering from partial obstruction, and at times where complete block exists, and that is,—avoid the use of the urethral catheter. It is conceded that the use of the catheter is at times a necessity, but its indiscriminate use should be avoided as it is likely to precipitate a complete block, thereby augmenting the patient's difficulties. The temptation to use the tube is great, however, and when complete retention has supervened, its continued use, of course, is necessary until the patient is again able to void, which usually requires from five to seven days. If a catheter is to be used, it should be of soft rubber, of small calibre, 10 to 12 French, and always inserted with extreme gentleness; so as to produce a minimum of trauma. In a few instances we have employed the suprapubic aspirating needle with excellent results in order to secure quick drainage, and this procedure, we find, is not required more than once or twice to re-establish the normal urinary flow. This, however, applies only to those cases in which the urethral catheter has not previously been used. If the catheter has been used before, the suprapubic aspirating needle is of no avail.

We believe that it is a safe policy to delay urethral instrumentation in all cases where acute in-

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flammatory reaction is present until the intense local symptoms have subsided, and then local measures may be resorted to, if indicated. Exception to the above rule is seen, and immediate drainage by way of the urethra is justifiable, when absorption toxemia is present. This should not be confused with the temperature elevation and the various systemic responses to an infection process. Pain or distress in the bladder area and in the vicinity of the rectum may owe its origin to retained fluid within the bladder. When present this should, of course, be relieved promptly. There is another reason why the suprapubic aspirating needle is warranted. It aids in preventing the onset of an acute epididymitis, which the late Doctor Bellfield observed, is likely to occur when the catheter is used in the presence of acute inflammatory changes associated with urinary retention. It is of interest to cite a single case to illustrate the effectiveness of the suprapubic needle:

W. C., a young man aged twenty, a Sergeant in the National Guard, Camp Dodge, September, 1928, referred by Doctor W. L. Bierring, appeared at the office late one evening, suffering from extreme urinary retention referable to the vesical neck. He admitted that no urine had been passed for the last sixteen hours and for the past two hours his distress had been very severe. A microscopic slide revealed the presence of an acute Neisserian infection, although this was denied in the history. For obvious reasons it was imperative that he should report for duty on the following morning without sick leave. The physical examination revealed a large distended bladder with no other significant finding except for a slight urethral discharge. The reflexes were normal and the Kahn test was negative. Under aseptic measures, the suprapubic aspirating needle with suction syringe was employed to empty the bladder. Twenty ounces of dark amber urine were withdrawn, which was negative except for a small cell content. The boy returned to camp the same evening and reported at the office the evening of the following day, at which time he had partial retention. The needle was again used and twelve ounces withdrawn. He was not seen again for a few days, when he admitted having had no more difficulty and received nothing further in the way of local attention.

Chronic inflammatory or sclerotic prostate: There are many synonymous terms used with reference to this type of pathology, such as prostatic fibrosis, median bar formation and collar-band obstruction. Histologically, the predominant tissue change is that of sclerosis, and on physical examination the prostate is found not to be enlarged. Differentiation from benign prostatic hypertrophy is arrived at by rectal examination and cystoscopy. In other words the clinical history of these two conditions is very similar and from this standpoint alone, they cannot be differentiated. The hyperplastic type reveals a distinctive enlargement into the rectum and also an intrusion of the lateral lobes into the bladder interior, while in the median bar type of obstruction, no enlargement is encountered rectally and the cystoscopic view shows only an elevation of the vesical trigone, with a bar-like rim at the base of the urethrovesical outlet. The lumen of the urethral canal is markedly diminished, both in diameter and circumference.

From personal experience and study of the work of others, we find that the management of each of these two different types producing urinary difficulty is quite dissimilar. The median bar or sclerotic prostate, if seen fairly early, can be spared surgical interference and responds in a remarkable manner simply to the use of the Kollmann dilator. If the process is well advanced and of long standing, however, then some form of closed surgery is advisable. At the present time, Caulk's electric cautery punch, a modification of the old Young's punch, with which we are familiar, is proving most popular. There are very few who are still recommending the suprapubic approach against the median bar in the uncomplicated cases. Years ago, Keyes cautioned with reference to this particular type of obstruction. "If we play heck with it, it will play heck with us." How often when doing a suprapubic or an open operation, expecting to find an enlarged, adenomatous prostate easy to enucleate, have we discovered instead, a small nubbin of a gland, a forerunner of trouble for everyone concerned with this procedure. In the instance of this type of obstruction, the history of one patient is presented:

Mr. W. A. P., a feeble man aged 72, of Mercer, Missouri, was referred, August, 1929, by Doctor O. J. Fay. A history of some urinary difficulty for the past fifteen years was given, with marked slowness of the stream for the past year. The patient denied other obstructive signs. The general physical examination showed nothing essential, and rectally, the prostate was not enlarged. The urine revealed rather heavy pus content and a residual of two ounces. The cystoscopic picture showed typical median bar formation. Urethral dilatation at intervals by means of the Kollmann dilator produced a marked abatement of symptoms, and microscopically clear urine was obtained with a residual of less than one half ounce. His condition remained satisfactory when seen four months later. Two weeks since he again reported a slight recurrence. The time element is short, of course, but nevertheless the relief from symptoms is significant.

Hyperplasia: The degree or amount of urinary retention produced by the so-called prostatic hypertrophy may not exceed that of the sclerotic type referred to. A very large prostate usually causes some retention and yet the amount may be small, while a small fibrotic gland may account for a very high residuum. We have seen a number of cases where the retention was in excess of 1000 c.c. The hyperplastic adenoma is a true surgical condition and temporizing measures are ineffectual. Open surgery is indicated and the surgeon may choose between the suprapubic or perineal routes. An interesting personal observation, and one that seems important to us, is that patients who have exceedingly large lobes removed, usually do well afterwards and have a smooth convalescence, as compared to those in whom the prostate is not so large and where the enucleation proved difficult. This is accounted for by the pressure changes forming the capsule of the obstructing lobes. We are inclined to believe that in the future, consideration will be given to the appropriate time for advising an operation, and from a study of the local changes involved in the

prostate, just as we now give consideration to the systemic factors, as the heart, kidneys and the general physical condition.

Neoplastic or carcinomatous prostate: The earliest manifestation of prostatic carcinoma is elicited by rectal examination, as the early signs of it are evident here. At times, in fact, it is the only diagnostic aid that we have at our command. Until the obstructive sign has asserted itself, either within the urethra or bladder, cystoscopy is of no avail. We cannot over-emphasize the value or importance of the digital rectal examination, a procedure available to everyone and one which should not be overlooked, even in unsuspected cases. In a patient of the prostatic age who presents himself on account of urinary obstruction, and is unusually sensitive to urethral instrumentation, malignancy should always be suspected, if the urine is found to be clear. We have never known this sign to fail, when on the lookout for it.

Prostatic cancer is well advanced when it has arrived at the stage where it produces local obstructive signs, and such signs signify partial or complete involvement of the gland with extension to the adjacent tissues and resultant pelvic fixation. Long before this there may or may not be demonstrable evidence of metastasis to the lungs or osseus system. Again there may be no evidence of distant metastasis at all, and the only sign or symptom may be that of obstruction.

Surgical interference in these patients is at all times a hazardous procedure and we have found the prognosis particularly poor in the patient who is comparatively young, between the ages of fifty and sixty. In the older patient, say seventy and above, in whom malignancy is of lesser degree, the open operation for prostatectomy is justified at times and can be recommended. Those who complain of pain in the urethra or rectum in addition to the obstructive symptoms, usually do not improve following the surgical removal of the malignant obstruction. Removal of segments of the obstruction through the urethra is reported favorably by some observers, notably by Caulk and Collings.

The institution of the suprapubic tube for permanent drainage is not encouraged in any of these patients, unless they can be assured of its subsequent complete disposal by the removal of the urethral obstruction which too often cannot be obtained. It is true that this is a very efficient form of drainage, the reaction on the upper urinary tract is favorable and general improvement is noted, but the improvement is soon discounted by the patient and after about sixty days, in our hands at least, an insistent demand is made for a change. The mental status of these patients cannot be disregarded by the attending physician.

A substitute for the suprapubic tube which we consider superior, is the employment of the indwelling urethral catheter, when complete urinary block exists. The catheter should be employed systematically, as its haphazard use will be attended with failure. One should begin with size No. 16 French catheter and in three to four days, under clean conditions, replace with a catheter two sizes larger, and so on until size No. 22 has been worn for a few days. After this time it will be found that the patient can void voluntarily, incompletely, of course, but nevertheless successfully. There is only one adverse feature which has proved troublesome and that is the rather high incidence of epididymitis, a temporary complication, and this can be prevented if vasectomy is done. A repetition of the catheter management has not been necessary in any of our cases, although in most of them there has been a consistent urinary retention for years.

CONCLUSION

Undoubtedly one of the most frequent of disturbing agents to the normal function within the urinary system is mechanical obstruction. A common site of this difficulty is in the vicinity of the vesical neck. Variations from the normal at first produce changes, physical in character, later systemic in nature, when not associated with infection.

In the presence of acute inflammatory reaction involving the prostate, urethral instrumentation should be used with caution. In certain instances, suprapubic aspiration is preferred. At times it is difficult to distinguish absorption toxemia of urinary retention from that of systemic reaction of an acute inflammatory process. The amount of urinary retention produced by prostatic obstruction does not in itself establish the type of obstruction produced, as prostatic fibrosis and benign hypertrophy present identical clinical pictures. It is probable that in the future, the lesser forms of surgery will be more frequently employed in chronic inflammatory conditions, as well as in the neoplastic types of prostatic disease. In some instances, continuous urethral drainage is preferred to that of suprapubic cystotomy in carcinoma of the prostate, even though the method may not be as efficient.

Hyperplastic changes or benign hypertrophy of the prostate belong to the field of open surgery and temporizing measures should not be encouraged.

Dr. Ralph E. Keyser, Marshalltown. Mr. President and members of the Society: I wish to mention one condition that does not occur frequently, but has come

up in my practice a number of times, and that is the metastatic abscess of the prostate which produces obstruction. I have had a number of these cases occurring in men in middle life, and most of them have followed furunculosis. The diagnosis is simple, and therapy is local. Occasionally one of these abscesses may have to be drained, and if so, it should be drained directly into the prostate gland.

I mention this because it is hard to find anything in the literature on the subject.

Success in treating prostatic obstruction, I believe, depends upon a correct diagnosis of the type of obstruction. If one knows the type of obstruction of the prostate and the underlying associated conditions existing in the upper and lower urinary tract he will not have very much trouble in treating the case. The majority of cases with a small sclerotic prostate can be treated with local therapy, and any type of open or closed surgery can be avoided, because in this particular type, the obstruction is due to an infection and the infection, therefore, must be treated.

Just one word about carcinoma of the prostate, and that is, it is very difficult in the early cases to make a diagnosis. Frequently I have removed a prostate thinking it was of the adenomatous type, only to have it come back from the laboratory labeled "carcinoma." It is very simple to diagnose late carcinoma of the prostate, but difficult to diagnose it in the early stages.

Dr. Hornaday did not mention the type of anesthesia used. I think the method *de luxe* in these cases is spinal anesthesia. Until the last year I have always used sacral anesthesia, supplemented with the abdominal block. I want to say (and I can recommend it very highly) that spinal anesthesia is *the* ideal anethesia for these prostate cases. It should be given with ephedrin and caffein sodium bensoate, but that you can find in the literature. If given properly, it is an ideal anesthetic.

CARCINOMA OF ILEUM

REVIEW OF LITERATURE WITH CASE REPORT

Otto N. Glesne, M.D., Fort Dodge

Rarely do we see a case of carcinoma of the ileum and still more rarely do we find that the diagnosis is made before operation. Our statistics regarding the incidence of carcinoma of the ileum have until the last year or two been dependent on autopsy reports. Of the 41,838 necropsies done at the Vienna General Hospital between the years of 1870 and 1893 Johnson reported that 3,585 were cases of carcinoma, 343 of which were carcinoma of the intestinal tract, with only ten cases of carcinoma in the ileum. Likewise, Mueller reported from the Institute of Berlin 5,691 autopsies with 521 cases of carcinoma, 42 intestinal and of these 42 only three were carcinoma of the small intestine. Maydl reported 1,460 cases of carcinoma in 20,480 autopsies, with 100 cases of intestinal carcinoma, four of which were carcinoma of the ileum. Brill's statistics showed 2,128 cases of carcinoma of the intestines in 24,160 cases of carcinoma and of these 50 were carcinoma of the ileum. Zieman reported 165 cases of carcinoma of the intestines out of 21,624 autopsies, six of which were in the ileum. A summary of these statistics indicates that carcinoma of the ileum represents only three per cent of all cases of intestinal carcinoma.

Rankin and Mayo more recently reported 55 cases of carcinoma of the small intestine, 14 of which were located in the ileum, compared with 8,932 cases in the rest of the gastro-intestinal tract from the cardiac end of the stomach to the anus. Carcinoma of the small intestine from their reports represented 0.62 per cent of all carcinomata in the gastro-intestinal tract and 1.2 per cent of intestinal carcinomata.

SEX AND AGE

The average age according to Rankin and Mayo was 47.5 years. Ewing gave an average of 46.5 years and Kayser 43.9 years. There is a wide variation in age, however, for Johnson reported a case 32 years of age. McEwen reported a case of adenocarcinoma in a youth aged 20. The oldest patient was 69 years of age. J. J. Robb reported one of 64 years.

Seventy per cent of all cases were in males and thirty per cent in females.

SYMTOMS

The chief complaint in nearly all cases was that of "abdominal cramps," "stomach troubles" and "obstruction."

Korsler doubts the possibility of early diagnosis due to the fact that the semi-fluid nature of the contents of the small bowel permits its passing through a considerably narrowed lumen so that the growth is far advanced before it produces symptoms. The onset of the symptoms may be sudden or insidious. Sooner or later the picture presented is that of acute intestinal obstruction with abdominal cramps usually in the lower quadrants, gaseous distension, nausea and vomiting and visible peristalsis.

Previous to the onset of the acute symptoms, the patient may complain of vague abdominal disorders and slight constipation. The duration of these symptoms is variable, from two months to three or four years, although the average is about one year. Microscopic blood in the stool with negative x-ray pictures is the most constant finding and should make one think of carcinoma of the intestines. In addition we may have a gradually progressive secondary anemia, weight loss, alter-

nating constipation and diarrhea. The majority of cases, however, do not show any signs or symptoms until those of acute obstruction are present. When pain begins it may be colic-like or paroxysmal. Progressive constipation or diarrhea gradually develops. Stomach symptoms such as nausea and vomiting, then appear with objective symptoms, such as tympanites and visible peristalsis. Tumor may occasionally be palpated through the abdominal wall. Auscultation revealing gurgling at the point of obstruction is a very significant sign.

The x-ray is of doubtful value. Roentgenologic examination is important from a negative standpoint only, i. e., when a patient has symptoms of an intestinal lesion, it is of value in ruling out duodenal ulcer and disease of the stomach and colon. Rankin and Mayo believe "that the danger of increasing the obstruction by retention of barium in an already obstructed intestine is a serious handicap to a successful surgical procedure."

PATHOLOGY

Carcinoma occurs more frequently in the jejunum than in the duodenum or ileum. Ewing divides carcinoma of the small intestine into three distinct forms: (1) A part of a local or general polyposis; (2) a late development of a single or multiple carcinoid tumor; (3) a localized adenocarcinoma with carcinomatous variations in structure.

The majority of cases show various grades of adenocarcinoma. Metastasis is a common accompaniment of malignancy of the small bowel. The mesenteric lymph-nodes, peritoneum, then liver, lung, long bones and dura of spine are involved in the order named. One-third of all cases give evidence of metastasis.

TREATMENT

Surgery is the only treatment, whether palliative or curative. One may do a one-or-two-stage resection of bowel with end to end anastomosis, depending upon the condition of the patient. "When tumor because of metastasis or attendant obstruction is not removable or resectable, enteroanastomosis, side-tracking the lesion, is the procedure of choice," says Rankin.

PROGNOSIS

Whether operation be done to relieve or to resect, the prognosis is notoriously poor. Length of life is short. No patient in the Rochester group has lived longer than three years and the average is less than six months. McCann reports a case that lived four years. Some feel that digestive activity of the small bowel, coupled with the abundant lymphatic supply and the high grade of malignancy of the tumors, is an important factor in the unfavorable prognosis.

CASE REPORT

Mrs. P. T., aged 52, was seen on June 29th, 1929.

Present complaint: Severe paroxysmal pain across the abdomen.

Present illness: On the 29th of June at 2:00 P. M. the patient was seized with severe cramp-like pain across the abdomen, perhaps more marked around the umbilicus. The onset was sudden and the pain so severe that she crawled around on her hands and knees on the floor, yelling and moaning. The pains would last for a minute and then start again, recurring at intervals of three or four minutes. The patient was seen within an hour after onset, at which time an examination revealed nothing in the chest or heart. A quarter of a grain of morphine was given (see P. H.). She obtained relief from this for four hours, when the pain again became acute and associated with this recurrence she had vomiting of bile. Morphine was again given and a blood count taken which revealed a leukocytosis of 12,000. There was apparent relief for the next twelve hours when the pain started again, associated with vomiting, perhaps a little more severe. During this time there had been no bowel movement although enemas had been given quite frequently. On the 30th of June at noon the patient was taken to the hospital and operation advised and done.

Past history: The patient had been exceedingly well up to the 3rd of February, 1929. Previous to this time she had hardly known a sick day and outside of a supposed attack of typhoid fever ten years ago the past history was negative. On the 3rd of February, 1929, the patient was seen because of severe griping pains over the whole abdomen. At this time she weighed 200 pounds. Examination of the abdomen on that date revealed a rigidity with slight tenderness which was not marked over the whole abdomen. Heart and lungs were negative and with this attack there was no vomiting. It was felt that there was a partial obstruction, the cause of which could not be determined. A quarter of a grain of morphine was given with enemas and complete relief obtained. For four years previous to this attack the patient had been without teeth and mastication of food was very poor. It was felt that perhaps this had something to do with the cause of the obstruction. It was advised at that time that patient come in for x-ray examination, but nothing was heard from her until the time of the present illness. Further questioning revealed two attacks about six months to a year previous to the attack in February. These did not last any length of time nor were they severe in character.

Family history: Eight children all living and well, otherwise negative.

Physical examination: The patient was a very well developed and well nourished woman aged 52 years, showing no evidence of anemia, lying in bed complaining of severe pain across the abdomen. The head, eyes, throat, neck, chest and heart were negative. There was no jaundice. Blood pressure 120/72. Pulse 80. Examination of the abdomen was difficult because of obesity but it was felt that there was a bilateral rectus rigidity with some tenderness to light pressure, no more localized in any one spot than in another; on deep pressure there was considerable tenderness but this was not more pronounced over any quadrant, in fact was about equal over the whole abdomen. Vaginal examination was negative except for tenderness when pressure was applied from above. Extremities negative.

Course: When first seen on the 29th of June, it was felt that this probably was a recurrence of the obstruction and patient was given morphine because of the favorable results received six months previous. However, no permanent relief was obtained from this and no results obtained from enemas so it was thought advisable to operate. On entrance to the hospital examination of urine and a complete blood count were done and it was found that the white cell count was 12,400, red cell count 4,300,000, and differential count normal. Urine examination was negative.

Operation: The patient was operated upon and when the abdomen was opened a great deal of serous fluid gushed out through the abdominal wound and there was considerable injection of the mucous membranes covering the small bowel. The appendix was examined and found to be absolutely normal. About two feet from the ileocecal valve on the small intestines there was found a scar-like contraction about the size of a dime, above which the ileum was dilated and below which it was collapsed. Examination did not reveal any enlarged glands in the mesentery, although examination was not very thorough. Because of the duration of the obstruction and the condition of the bowel it was felt that a jejunostomy should be done. This was done, bringing the tube out through the omentum and through a stab wound in the abdominal wall. A small portion of the bowel around the scar-like contraction was removed with the mass and a closure made. No resection with anastomosis was done.

The patient died twenty-four hours after operation, apparently from pneumonia of the right lower lobe. Unfortunately, postmortem was not permitted so that a more thorough examination of the abdomen could not be made.

Pathologic report: A section of tumor removed from the intestine was sectioned and the following report was received from Dr. Bell: "This is a decidedly rare tumor. It is still more rare to have it be responsible for clinical symptoms. It is not the ordinary adenocarcinoma of the intestine but a type

which resembles the carcinoid of the appendix. Some authors refer to this as a carcinoid, but your case is a distinctly malignant tumor which has caused stenosis."

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College of Medicine
State University of Iowa

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THE MECHANISM OF PAIN IN PEPTIC ULCER

Fred M. Smith, M.D., and W. D. Paul, M.D.

Epigastric distress of extra-gastric lesions may so resemble that of intra-gastric lesions that a detailed study is frequently needed for differentiation. Clinical observations indicate that this discomfort is induced by stimulation of the stomach. In a former investigation a reflex stimulation of the stomach from colon, gall bladder, and appendix was demonstrated in the dog.[1] This investigation was followed by a study of patients with localized recurring epigastric distress, associated with irritable colon and chronic appendicitis.[2] In this study a balloon was introduced into the pyloric section of the stomach and the gastric activity registered on a kymograph. The epigastric pain was induced by either introduction of air in the colon or massage of the irritable section of the colon, and in the instances of chronic appendicitis over the ileocecal region. It was observed that the pain was coincident with changes in tone of the pyloric section of the stomach and passage of peristalic waves over this section.

In this investigation it was found that in certain instances of peptic ulcer, a reflex stimulation of the stomach from the colon might be induced by introduction of air through a rectal tube. The distress observed under these circumstances was described by the patients as being identical with that experienced from their peptic ulcers. This led to a study of the mechanism of pain in peptic ulcer by similar methods. Only those cases were selected for study which were proved to be peptic ulcers after careful clinical and roentgenological studies. Here again the pain corresponded with changes in tone and the passage of peristaltic waves over the pyloric section of the stomach. The introduction of alkalies did not appear to influence this discomfort except when gas was permitted to escape either through eructation or through the pyloric sphincter into the duodenum. Instances were recorded in which intense pain was precipitated by introduction of sufficient alkalies to render the gastric contents alkaline. In this connection it was interesting to find that the introduction of air into the stomach was one of the most effective means of producing pain in the acute stages of peptic ulcers. Influence of acid (½ to 1 per cent hydrochloric) in quantities of 200 to 400 cc. was also observed. So far in the investigation this agent does not appear to have any significant influence on the distress. This work is still in progress; at present we are engaged in a detailed study of the various features of the altered physiology of peptic ulcer and factors ordinarily employed in controlling them.

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THE CLINICAL HISTORY AND PATHOLOGIC OBSERVATIONS IN A CASE OF SYSTEMIC BLASTOMYCOSIS

Clark N. Cooper

A. H., white male, 41 years of age, entered the University Hospital on August 22, 1930. He complained of pain in the back and upper abdomen.

About April 15, 1930, while working on a farm the patient noticed pain in the right upper quadrant of the abdomen radiating into the back. About May 1st, within a month of the onset, the patient became conscious of a lump in the left frontal region which at no time was painful, tender or red. At the same time several ulcerative skin lesions developed on his face, persisting a month or so, then subsiding, but with subsequent similar lesions.

On June 25th, after the abdominal and back pain had persisted for two months, an exploratory laparotomy was done, periappendiceal adhesions being the only pathology found. An appendectomy was performed with no symptomatic relief.

One week post-operatively, the pain also involved the left upper quadrant, radiating into the lower thoracic region posteriorly.

Just prior to his admission, approximately four months after the onset, additional skin lesions developed on the dorsum of the left hand and a



Fig. I. Osteolytic lesion involving both tables in the left frontal bone. Oidiomycosis of skull.

subcutaneous abscess developed over the right ankle.

Since April there had been a weight loss from 150 to 119 pounds and a corresponding failing of strength.

Social History: Farmer, 41 years old, married for 22 years, living with his wife, alive and well. Five children alive and well. None dead.

The past history was not remarkable.

Upon physical examination there was found a well developed, poorly nourished white male. In the left frontal region was a soft swelling 3 cm. in diameter. An excavated granulomatous lesion was present on the right cheek. A papulopustular lesion involved the right nostril. Another was on the chin. A fairly acute angular kyphosis was present in the lower thoracic spine with moderate tenderness. No sensory or motor disturbance was found. At the base of the right lung breath sounds were suppressed and many medium and coarse rales audible. There was an indolent subcutaneous abscess over the dorsum of the right foot. The urine was negative. Hb-85″. Gradually fell as low as 59 per cent. Erythrocytes 4,700,000 decreasing to 3,400,000. Leukocytes 8,500. The maximum count was 12,000. Blood and spinal fluid Wassermann, negative.

X-ray examinations were numerous. The skull showed a defect involving both tables in the left frontal bone. (Fig. 1.) The chest showed at first a parenchymal involvement only of the right lower lobe, but terminally a diffuse mottling of both lungs. The spine showed destruction of the ninth thoracic with involvement of the tenth thoracic vertebrae extending to the adjacent ribs.

The right elbow showed an osteolytic lesion of the olecranon.

The patient's course was steadily downward. A productive cough developed. Smears of the sputum were negative for acid fast bacilli and fungi.

Smears, cultures and guinea pig innoculation of practically all lesions gave no positive results until October 22, 1930, when a smear from the lesion on the nose revealed a yeast-like organism.

The patient died October 28, 1930, a little more than six months after the onset of symptoms.

Upon post mortem examination, three extensive areas of skin ulceration involved the face. All presented irregular sharp borders enclosing areas of reddish, papillated granulation tissue covered by a greenish yellow purulent material and brownish scabs. About the peripheral portions were small abscesses from which the blastomyces were obtained.

Examination of the lungs showed the right to weigh 1100 and the left 780 grams. The surface of both lungs showed a marked thickening of the pleura, especially over the lower lobes, with obliteration of pleural cavity. A vertebral-pulmonary abscess had formed opposite the ninth dorsal vertebra on the right. Both lungs on palpation pre-

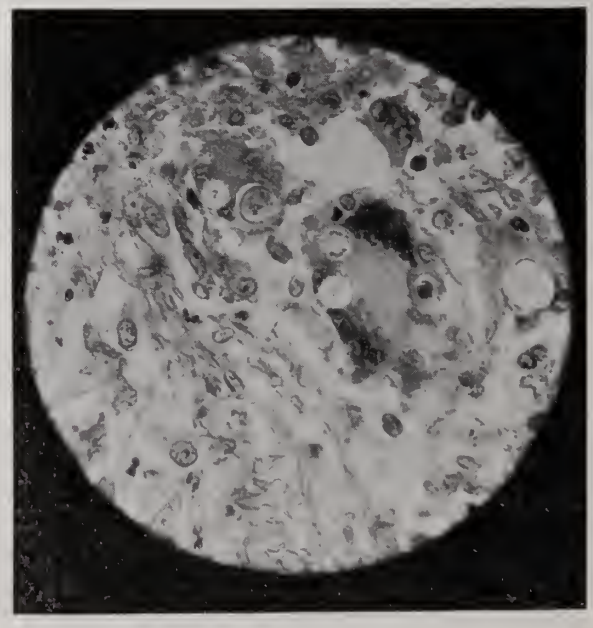


Fig. II. Oidiomycosis of lung. Interstitial pneumonia. Note giant cells containing yeast-like bodies, with double contoured hyaline capsule. x450. A-30-194.

sented a shotty infiltration of tubercle-like masses throughout. The cut surface showed the lung parenchyma infiltrated with yellowish white nodules varying from ½ to 4 m.m. in diameter with central suppuration of many. Grossly this could not be differentiated from the lesions of miliary tuberculosis. It was essentially an interstitial pneumonia. (Fig. II.)

The eighth, ninth and tenth dorsal vertebrae were involved by a suppurative osteolytic lesion extending to the adjacent ribs and right pleural cavity. The dura over the spinal cord in this region was thickened and partially adherent to the cord but grossly intact. The skull lesion was similar but with less evidence of activity. The dura in this location was intact and there was no reaction in the underlying tissue. The olecranon of the right ulna showed destruction with a suppurative invasion of the elbow joint filling it with a greenish yellow grumous pus.

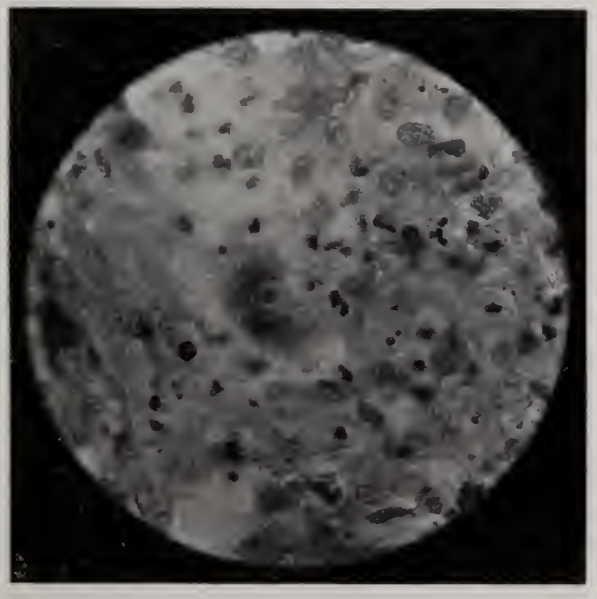


Fig. III. Section of lung showing giant cell with blastomycete. x 450. A-30-194.

The prostate was found honeycombed with abscesses. The infection had broken posteriorly to extend downward and laterally along the rectum to an external opening just posterior to the anal orifice.

Microscopically these lesions of the skin, lungs, bones and prostate showed multiple areas of well marked inflammatory reaction consisting of polymorphonuclear and endothelial leukocytes and considerable fibrin. Blastomycetes were enclosed in the endothelial leukocytes and in the numerous multinuclear giant cells, due probably to fusion of endothelial cells. (Figs. II, III, V.) Necrosis of these areas had brought about multiple abscesses or ulcers, according to the location of the lesions. The lungs showed an interstitial lobular pneumonia, in which some scarring had occurred on the right. The blastomycetes were isolated from the lungs, elbow, foot and prostate.

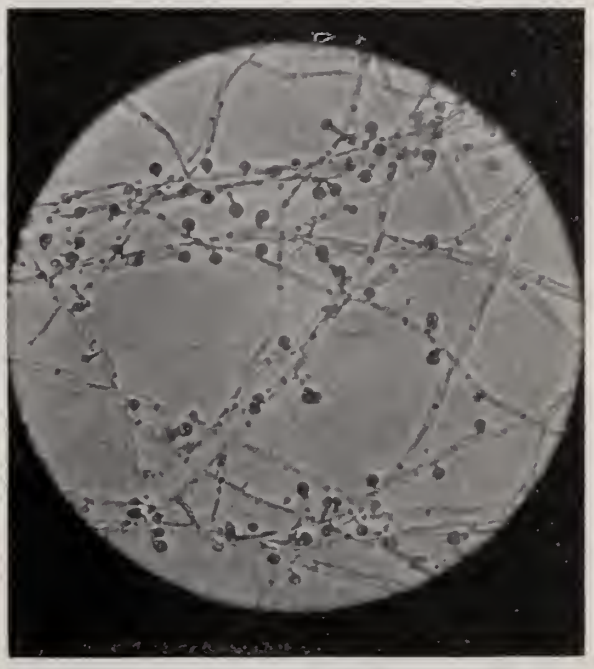


Fig. IV. Oidium Gilchristi—120 hrs. 25° C. Note terminal hyphae. Isolated from A-30-194.



Fig. V. Showing the giant cell with blastomycete seen in Fig. III under oil immersion. A-30-194.

Discussion

Gilchrist in 1894 described an unusual form of dermatitis, from the lesions of which he was able to identify yeast-like organisms. Because of the budding forms he termed them blastomyces. During the same year Busse isolated similar organisms from the lesions of a systemic case. Confusion as to the actual number of cases reported exists because of the multiplicity of names found in the literature.

Blastomycosis is a suppurative and granulomatous process involving the skin and internal parts due to the infection of a yeast-like organism of the oidia group. The majority of cases are limited to the cutaneous tissues, but in others, the systemic type, as just described, lesions may occur in practically every structure of the body, notably the lungs and bones. In a statistical study of the organs found involved in 33 systemic cases, Wilheleng found the skin involved in 97 per cent, the lung in 90.9 per cent, the bones and joints other than skull and vertebrae, in 51 per cent, vertebrae in 27 per cent, skull bones in 21 per cent, and prostate in 15 per cent. The bone lesions are of a suppurative osteomyelitic nature and in the long bones tend to occur in the epiphyses with destruction of joint tissues and purulent arthritis. The fungus elements occur in the pus and lesions chiefly as spherical bodies each consisting of a protoplasm mass and an enclosing double contoured hyaline capsule with a diameter of 20-30 microns. (Figs. II, III, V.) Proliferation takes place by budding which appears usually as ½ to ⅓ the diameter of the parent cell and grows to the size of the latter. In culture they grow with the formation of septate hyphae and mycelia as do molds. (Fig. IV.) The skin and lungs are important atriae of infection in systemic cases. The distribution is by the blood stream. The majority of cases occur in men under 40 who do manual labor, living in unsanitary conditions with dampness and fungus growth.

Blastomycosis is to be considered in chronic pustular and ulcerative conditions of the skin, in wasting pulmonary disease, in spontaneous abscesses, especially those connected with bones, in suppurative arthritis and suspected tuberculosis of the spine.

In any clinical analysis of the fungi a simple classification is adequate. Fungi are first divided into perfect and imperfect groups. The perfect fungus is one in which sexual spore formation occurs. When this is observed, the organisms may be cast aside because no perfect fungi of importance are known to be pathogenic. In study of the imperfect fungus of a given case, two primary considerations are necessary for an accurate diagnosis. First, a study of the lesion itself, the histopathology and the character of the organism with the body tissues as a medium. Secondly, a study of only such additional cultural characteristics of the organism as will be necessary for identification. It must be emphasized that both types of study are essential for accurate clinicopathologic conclusions. For example the botanist is concerned only with the cultural characteristics of a given organism. These are so varied and inconstant with slight alteration in conditions of growth that scores of species of a given fungus have been described. When only material for culture is provided the pathologist is largely confined to botany. In culture two totally different fungi, for example the sporothrix and the blastomyes, may appear strikingly alike while in the body tissue the findings are totally different. In dual study accurate diagnosis is accomplished.

With the above in mind, the imperfect fungi fall into four clinical groups:

1. The dermatomyetes including ring worm, favus, etc.
2. The streptothrix of which actinomycosis is the important one.
3. The sporothrix of sporothricosis.
4. The yeast-like organisms.

It is in this latter group that blastomycosis is contained and must be differentiated. The yeast-like organisms include the oidium, the monilia, the torula and the coccidoides. The oidium of which blastomyces is the important member, reproduces by budding, forms mycelia and ferments carbohydrates with acid but without gas. The monilia, the etiological agent of thrush and possibly sprue, is identical to the oidium in culture except by the formation of both acid and gas on sugars. The coccidoides granuloma, produces a disease clinically very similar to blastomycosis but is differentiated by the fact that the yeast-like bodies do not reproduce by budding but by fragmentation of the cell body, called endospore formation. The torula, the fourth of the yeast-like organisms, reproduces by budding, but produces no mycelia, does not ferment sugars. It has a predisposition to involve the nervous system.

Case Report

MYXEDEMA

MAURICE T. BATES, M.D., Yale

There has always been great interest in the condition known as myxedema since the first description by Gull in 1874 of a "cretinoid change occurring in adult life in women." In 1883 Kocher published a series of sixteen cases in which total thyroidectomy had been followed by a characteristic picture to which he gave the name "cachexia strumipriva." He recognized that this condition was clinically the same as that described by Gull. The final proof of the etiologic relation of the thyroid to myxedema was added in 1891 by George Murray, who cured a case by administering an emulsion of sheep's thyroid.

The onset is usually slow with mental dullness and loss of memory. The gain in body weight, mental changes and skin manifestations are commonly among the first symptoms noted. The



Before treatment June 16 | After 2 weeks July 1 | After 2 months August 15

patient sleeps a great deal and thinks slowly and speech is slow and hesitating. Delusions and hallucinations may develop leading to a final condition of dementia. The skin is pale, yellowish, dry and scaly. Lack of sweating is quite noticeable. The features are coarse and often have a stupid appearance. The pulse is usually slow, 40-60 per minute. Patients are often sensitive to cold and suffer intensely in winter. The temperature may be below normal. There is a considerable gain in weight and a firm, inelastic swelling of the skin which does not pit on pressure. In most cases there is a moderate degree of anemia.

Osler says: "The diagnosis is easy as a rule." This certainly is true if the condition occurs to the physician's mind, but because the average practitioner so seldom sees a case of myxedema, the majority of these patients are wrongly diagnosed and are treated for nephritis or anemia. The general aspect of the patient often suggests nephritis and many cases do show the urinary findings of some kidney damage, but the low temperature, loss of hair, the dull listless mental state, and the dry, rough skin and finally, the low basal metabolism should differentiate between the two. Many cases also suggest anemia and present the pale yellow color of pernicious anemia but not the glossitis or nucleated red cells. The most important single factor in the diagnosis of myxedema is the low basal metabolic rate but a low rate of —20 or even —30 in the absence of other signs is not diagnostic.

The treatment of myxedema dates back to 1891 when Murray, by using thyroid extract of sheep, provided a specific for an otherwise almost hopeless disease. The treatment is divided into two stages: First, the initial treatment, or the amount needed to bring the metabolism up to normal, and second, the permanent dosage, or the smallest amount necessary to maintain normal metabolism. The average initial dose is gr. 2.t.i.d. for ten days. Visible effects of the drug usually appear in five to seven days and are manifested by a feeling of warmth, slight acceleration of the pulse rate and quicker mental reactions. During the second week there is usually some elevation of temperature, a sharp loss of body weight, sweating and a rapid increase in metabolism. If any of these effects are absent the disease is probably not myxedema. Following the establishment of normal metabolism the dosage necessary to maintain this normal must be determined. This permanent dosage is usually about 1 to 2 grs. daily.

The treatment should be controlled by (1) the clinical response of the patient, (2) the basal metabolism, (3) the early morning pulse, (4) the temperature, (5) the body weight. Treatment should be carried out preferably in the hospital with frequent estimations of the metabolism and weight. In home treatment in the absence of frequent basal metabolism readings an estimation of the early morning resting pulse will give a fairly accurate idea of the basal metabolic rate. Rapid pulse, elevation of temperature, restlessness, delirium, nausea and diarrhea are indications of overdosage of the thyroid extract.

There are certain dangers to be guarded against in treating a case of myxedema. The heart, the kidneys, and the blood should be carefully checked before beginning the treatment. Many patients with myxedema have considerable kidney damage as shown by urinalysis and a low phthalein output. It has been demonstrated that the administration of thyroid substance increases the retention of urea nitrogen; thus, in these cases with kidney damage there is a definite danger of uremia if thyroid is given too rapidly. Likewise, many patients have an already damaged myocardium, and when the metabolism is suddenly increased by feeding thyroid the burden upon the weakened circulatory system is too great. In this type of case the patient should first be thoroughly digitalized. If these two dangers are guarded against and the patient will co-operate most cases of myxedema can be restored to normal health. Thyroid medication in practically every case will have to be continued throughout the remainder of the individual's life.

CASE REPORT

Mrs. H. was first seen on June 16. She came in complaining of "heart trouble," for which she had been treated for the past four years. Among her entrance complaints were weakness and swelling of the legs and body. The present illness began about five years previous, with swelling of the legs and body, gradual increase in weight, and inability to do any work because of weakness. At about puberty she had had an enlargement of the thyroid which gave toxic symptoms when she was twenty-three years old. At that time she was told that she had exophthalmic goitre. About eight years ago this enlarged thyroid

disappeared spontaneously, without treatment. A few years later symptoms of the present trouble began. Family history shows that the mother and two sisters have goitre. Further questioning revealed an absence of sweating and a marked inability to stand cold weather.

Physical examination showed a very obese woman of thirty-five, having a dull, stupid facial expression. The face was very puffy with the eyelids swollen almost shut. Her speech was slow and halting, giving the impression of mental blocking. The skin was yellowish and quite rough, especially on the exposed surfaces. The thyroid gland was not palpable. The pulse was 50. The heart was essentially negative, as was the urine. Body weight was 198. The basal metabolism on the following day was 34 minus.

After being put on thyroid gland substance, 2 grains, three times a day, there was a sharp loss in weight, an increase in the pulse rate and some improvement in speech rate. By the end of the second week symptoms of an overdose asserted themselves and the dosage was decreased to 1 grain, two times a day, and later to 1 grain daily. No further metabolic tests were made, the dosage being regulated by the weight and the early morning pulse rate.

At present the patient presents an altogether different picture. The dull facial expression has disappeared, speech and mental processes are faster, the skin is soft, smooth and moist, body weight is thirty pounds less, and she is now able to attend to her housework without undue fatigue.

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THE JOURNAL LANCET CELEBRATES ITS SIXTIETH ANNIVERSARY

The February issue of *The Journal Lancet*, the official journal of the North Dakota and South Dakota State Medical Associations, was set aside as an anniversary number commemorating the founding of this journal sixty years ago, when the *Northwestern Medical and Surgical Journal*, its forerunner, was started by Dr. Alex Stone. This pioneer journal, however, continued publication for only two years under Dr. Stone's management when it was taken over by Dr. Hand and Dr. Kimball, who continued this publication until 1874, when the journal was suspended.

The next medical journal to appear in Minnesota was the *Northwestern Lancet*, the first number of which appeared in October of 1881. This journal was privately owned and after passing through several hands was finally purchased by Dr. Stone, whose efforts to establish a medical journal some fifteen years earlier had proved unsuccessful. Under Dr. Stone's ownership, the journal continued the name of the *Northwestern Lancet* and claimed to be the successor of the original *Northwestern Medical and Surgical Journal*. In 1912, under the editorship of the present editor, Dr. W. A. Jones of Minneapolis, the title was changed from *Northwestern Lancet* to *Journal Lancet* to combine the two names of the earlier journals.

The *Journal Lancet* during the past twenty years under the able leadership of Dr. Jones has assumed a place of much importance among medical journals. It has catered to special medical activities and interests in a rather large geographical area comprising Minnesota, North Dakota, South Dakota, and Montana. The able editorials have attracted much attention, not only in this particular territory, but in the entire field of medical journalism. Those acquainted with the work justly feel that the journal under the editorship of Dr. Jones has wielded a tremendously important and beneficial effect upon the organized medical profession of the entire northwest. The JOURNAL of the IOWA STATE MEDICAL SOCIETY extends greeting and best wishes to the *Journal Lancet* on this, its sixtieth birthday.

THE NEW AMERICAN JOURNAL OF CANCER

The *American Journal of Cancer*, which made its first appearance in January of 1931, continues in a much elaborated form the *Journal of Cancer Research*, which has completed fourteen volumes. The plan of the new journal is to continue the presentation of original papers on experimental work and will add to these, clinical contributions representative of the best opinion and practice both in America and abroad. Photographs, microphotographs, drawings, diagrams and color plates will supplement the articles where such illustrations can be used advantageously to clarify the text. One of the important new factors of the journal will be a complete abstract service covering the subject of cancer in all its phases and relationships not only with the various branches of purely medical science —pathology, gynecology, dermatology, urology, neurology, surgery, etc.—the statistical, educational and public health aspects will also be covered.

In each issue a certain space will be devoted to editorial comment based upon the material presented. The first number of the new journal contains over 550 pages of scientific material and from the character of the papers presented, it appears that this journal will be operated upon a very high scientific plan and will fill a long-felt need for accurate scientific knowledge in this subject.

The JOURNAL of the IOWA STATE MEDICAL SOCIETY extends to the *American Journal of Cancer* a very hearty welcome into the field of medical journalism and congratulates the editorial board of the new journal in securing Dr. Francis Carter Wood as editor.

ANNUAL MEETING IOWA PUBLIC HEALTH ASSOCIATION

The Iowa Public Health Association will hold its sixth annual meeting in Des Moines, on Thursday and Friday, April 2 and 3, 1931. The headquarters of the meeting will be at the Hotel Fort Des Moines. This conference will be of special interest to health officers, public health nurses, and others interested in public health activities.

The program will occupy two full days, and will bring to Iowa talent of national repute. The banquet speaker will be Dr. Taliaferro Clark, formerly of the Division of Maternity and Child Hygiene, of the United States Public Health Service, and at present with the Division of Venereal Disease Control, of the United States Public Health Service. Dr. Arthur T. McCormack, state health officer of Kentucky, will speak on Friday.

A detailed program of the meeting may be secured by addressing Dr. D. C. Steelsmith, Commissioner of Health, of Des Moines, Iowa.

State Health Commissioner's Page

D. C. Sturlaugh, M.D.

The most prevalent diseases reported to the Department during the month of January were scarlet fever, chickenpox, smallpox, whooping cough, mumps and diphtheria in the order named.

SCARLET FEVER

After reaching a new high level of 4,315 cases in 1929, scarlet fever dropped in 1930 to approximately the level of 1928 (2,898 cases) with 2,836 cases. It was thought that the present season would continue with a smaller number of cases than that for 1929. This hope seems to be vain since 1931 started off "with a bang," 541 cases being reported in January. Attention is called to the minimum period of quarantine prescribed for this disease. All cases of scarlet fever must remain in quarantine at least 28 days. In connection with the mildness of many cases the subject of "Duke's Disease" has been mentioned on more than one occasion. This Department does not recognize "Duke's Disease" as a clinical entity but classes it with scarlet fever. All cases diagnosed as scarletina, scarlet rash, or "Duke's Disease" must be handled as cases of scarlet fever. Sixty-one deaths from scarlet fever were recorded in 1930 and while the case fatality rate is only 2.1, this does not indicate the number of cases in which there were complications, such as otitis media, cervical glands and nephritis. The degree of severity of the disease seems to have little or no influence on the occurrence of complications.

CHICKENPOX

In 1930, 2,252 cases of this disease were reported, 145 cases more than have been reported during the last seven years. During January, 324 cases were reported. Diagnosis of chickenpox in an adult should be made with caution since the disease is so often smallpox.

SMALLPOX

This disease continues to be "in the money." During 1930, 3,044 cases were reported. In January, 216 cases were reported. This is 335 less than were reported in January, 1930, but the figure is still too high. Vaccination will prevent smallpox.

DIPHTHERIA

Diphtheria continues relatively low. In January, 1931, 46 cases were reported compared with 55 cases in the same month, 1930. The total number of cases reported for 1930 is 412, which is 15 cases more than the total for 1929. The deaths, however, were two less for 1930 than for 1929, being 45 and 47 respectively. The number of deaths for 1930 is, of course, a tentative figure. More extensive use of toxin-antitoxin will reduce still further the number of cases and deaths from this disease.

COUNTY HEALTH UNITS

It is with pleasure and satisfaction that the announcement is made that there are now in active operation in Iowa three full time county health units, whose organization is complete with county health officer, county nurse, sanitary inspector and clerical assistance. These units are operated by Woodbury, Washington and Des Moines counties. Two other counties have organized units but are awaiting the appointment of a county health officer. These counties are Delaware and Plymouth. Dubuque county now has the question of organizing a county health unit under consideration.

FIELD TRIPS

Four field trips were made by the epidemiologist, one for meningitis, one for smallpox and two for scarlet fever.

The JOURNAL of the Iowa State Medical Society

ISSUED MONTHLY

RALPH R. SIMMONS, Editor.....Des Moines

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EUROPE FOR STUDY AND PLEASURE

The American people are recognized throughout the world as experienced travelers. Since the World War increasingly large numbers of Americans have visited Europe, some prompted by patriotic or sentimental reasons, others because the experiences of the war indicated the ease and comfort with which the American tourist could travel in European territory.

Physicians have been lured to Europe in increasingly large numbers, since the experiences of the war and the reconstruction period immediately following the war stressed in a most forceful way the high point of medical and surgical excellence attained by many European hospitals and individual physicians in medical practice. The economic distress experienced by many of the European countries following the war has opened avenues of instruction heretofore closed to the American physician desiring postgraduate instruction. The same factors have been operative in reducing materially the cost of such advanced tutelage.

In announcing the cooperative Clinical Tour, conducted under the personal leadership of Dr. Frederick C. Warnshuis, Speaker of the House of Delegates of the American Medical Association and Secretary of the Michigan State Medical Society, we feel that we are bringing to our readers a rare opportunity, not only for a trip of personal pleasure, but also of professional profit at an exceedingly nominal cost. Under the business management of the Travel Guild, Inc., a tour has been planned which will carry the participating members through the outstanding clinics and clinical centers of Europe. Through the personal influence of Dr. Warnshuis and the contacts established in many years of experience by the Travel Guild, ready entrée has been secured to such medical centers as London, Paris, Berlin, and Vienna. The clinical features of the tour will involve novel departures from the established precedent of many former tours. Instead of arranging mass clinics which are chiefly of a spectacular interest, contacts will be arranged for the group making up this travel party governed by the interest of those participating. Each member is asked in registering for the tour to indicate his special field of work, and to mention any specific clinics en route that he particularly wishes to visit. Upon a final analysis of these questionnaires the clinical arrangements will be made. Such a program assures professional contacts of the highest order and further guarantees professional benefit from this European sojourn.

To the average physician, however, a trip abroad is not considered solely as one for study. Particularly if he includes other members of his family, as he may in this outing. With this in mind the Travel Guild tour provides innumerable opportunities for visiting the many points of interest in the cities and the countries visited. Ample time will be provided for general sight-seeing so that even while clinics are in session those members of the party not desiring to attend clinics may be conducted on highly interesting sight-seeing trips. The tour offers essentially all that any standard tour of high grade can offer plus individual clinic services of highest order.

Any physician who is a member in good standing of the Iowa State Medical Society is eligible for registration on this tour and through special arrangement with the tour manager, the editor of the JOURNAL OF THE IOWA STATE MEDICAL SOCIETY, is delegated to receive and forward applications from this state. The society will receive a small fee for this service from the Travel Guild For details and itinerary of the trip, the reader is directed to a display advertisement of the tour appearing in the advertising section of this issue.

And now, for the biggest surprise of all, the price of this tour employing high grade hotels and first class transportation, and including individually arranged clinical opportunities, is offered at only $895.00 per person. This price is made possible because of the well-established management and the elimination of commissions and booking fees in securing registration.

You are urged to give this matter your immediate and thoughtful consideration, and if additional information or reservations are desired, address Dr. R. R. Simmons, 1122 Bankers Trust Building, Des Moines, Iowa, or the Travel Guild, Incorporated, 180 North Michigan Avenue, Chicago, Illinois.

A Survey of the Itinerary

The meeting of the American Medical Association in Philadelphia is practically finished on the afternoon of June 11. Those who take this cooperative tour to Europe may leave Philadelphia at 6:14 that evening, arrive in Montreal at 7:20 the next morning and proceed to the S. S. "Montclare" which sails at 10 a. m. that morning (June 12).

June 12	Sail on the S. S. "Montclare" from Montreal.
June 13-19	At Sea.
June 20	Due to arrive at Liverpool. By rail to London.
June 21-27	LONDON One whole week in London. Local sightseeing program in the city and a one-day trip through the Shakespeare country by motor. Also arrangements for clinics at St. Bartholomew's, London City, and other hospitals.
June 27	By night service to The Hague.
June 28	THE HAGUE Standard sightseeing here and a visit to Dr. Schumaker's famous clinic. By afternoon train to Amsterdam.
June 29	AMSTERDAM Standard sightseeing here and an excursion by boat to the Isle of Marken, Volendam, etc. A number of interesting clinics are located in Amsterdam.
June 30	By fast train to Berlin.
July 1-4	BERLIN A full day of sightseeing in the city and a full day excursion by motor and steamer to Potsdam. Some of the most famous clinics in Europe are in Berlin in connection with which doubtless Dr. Von Baer and Dr. Sauerbruck are best known.
July 5	By rail to Leipzig.
July 6	LEIPZIG Motor tour around the city here and inspection of the clinics of the University of Leipzig, one of the largest in Europe.
July 7	By morning train to DRESDEN A motor tour of the city and arrangements at the chief clinics.
July 8	By rail to Prague.
July 9	PRAGUE A very interesting city sightseeing program and visits to the clinics of both the German and Czek Universities here will be provided.
July 10	By rail to Vienna.
July 11-14	VIENNA The mecca of all clinicians. Arrangements at the University and the general hospital of the city under the auspices of the American Medical Association of Vienna. Also a very interesting sightseeing tour in the city and excursions out of town to the beautiful old imperial palace at Schoenbrunn and the heights of Coblenz.
July 15	By rail to Munich via Linz.
July 16-18	MUNICH An interesting program of city sightseeing and entrée to the great clinics of the city and the universities. It is here that Dr. Sauerbruck made his reputation. Famous for its beer!
July 19	By rail to Zurich via Lindau.
July 20	ZURICH The largest university in Switzerland and its chief medical school are located here. Also a part of the Swiss playground of Europe. By afternoon train to Lucerne.
July 21	LUCERNE The principal interest here is in the beauty and charm of the city and the trip into the neighboring mountains. An excursion the whole length of the lake to Fluelin and return.
July 22	Via the Brunig Pass and Interlaken to Berne by rail.
July 23	BERNE The capital of Switzerland and the clinic made famous by Dr. Kocher and Dr. Dequervain are here.
July 24	By rail to Paris.
July 25-30	PARIS Here again general sightseeing interests are fairly coordinate with clinical opportunities. Full sightseeing programs in the city and to Versailles and Malmaison. Among clinics the American Hospital and the work of Dr. Tuffier and Dr. DeMartel are famous.
July 31	By rail to Cherbourg and sail on the S. S. "Montrose."
August 1-7	At Sea.
August 8	Due to arrive at Montreal.

Those who wish to return to New York or on any subsequent sailing either to Montreal or New York may do so providing berths are available at the time of booking.

The price, which is only $895, includes minimum rate cabin class (the best class on the ship) in each direction, strictly A-grade hotels throughout Europe,

all rail transportation, transfers to and from hotels, railroad stations, steamship docks, etc., handling of a stated amount of luggage, and all sightseeing arrangements, entrance fees and clinic programs.

Compare this price with any other tour that guarantees A-grade hotel accommodations in Europe and you will see the genuinely cooperative reduction that is being allowed in this one.

TRICHINOSIS

In this country trichinosis is a comparatively rare condition, but a condition which because of its severity must be remembered and considered. Dr. Myron Metz, health officer of Williamsville, of New York has recently reported to the United States Department of Agriculture, an outbreak of this disease affecting some fifteen persons. He was able to trace the disease to the ingestion of improperly cooked pork and by advising all consumers of this pork of their danger, to secure sufficiently early treatment of the cases which developed to prevent deaths.

In a recent government bulletin (Leaflet No. 34L, "Trichinosis: A Disease Caused by Eating Raw Pork,") the United States Department of Agriculture calls attention to the fact the one to two per cent of all hogs slaughtered in the United States are affected with trichinae, and that there is no definite way of determining the presence of the parasite in the live animal. In many cases it is impossible to determine the presence of the parasite in the meat unless detected in the cystic stage.

During the winter months in this section it is common to find families slaughtering hogs for personal consumption and using the meat derived in this manner in various forms where little cooking is required. In animals slaughtered under governmental supervision products intended for human consumption without further cooking are thoroughly processed to destroy trichinae. Such precautions, however, are rarely employed in home slaughtering, and for this reason the disease may occur in any community, particularly during this season of the year.

Where symptoms of gastro-intestinal disturbances, nausea, vomiting, and diarrhea occur followed by myositis, especially when associated with eosinophilia, trichinosis should be considered and if diagnosed, proper precautions instituted to insure protection against the contaminated pork or early treatment of those infected.

WILLIAM HENRY WELCH AT EIGHTY

The officials of the Millbank Memorial Fund, who were responsible in a large measure for the national celebration of the eightieth birthday of William Henry Welch, Dean of American Medicine, have recently released a volume entitled "William Henry Welch at Eighty" which presents in full the various addresses made during the national celebration and describes the various honors bestowed upon Dr. Welch.

The first copy of this book was presented to Dr. Welch at a special dinner in the American Club, Baltimore, on January 29th, when about forty intimate friends of Dr. Welch met to again pay honor to their friend and leader. Speakers of the evening were Dr. Simon Flexner, Mr. John D. Rockefeller, Jr., Dr. William G. MacCallum. Baxley Professor of Pathology at Johns Hopkins, Dr. William H. Howell, Director of the Johns Hopkins School of Hygiene and Public Health, and Mr. John A. Kingsbury, Secretary of the Milbank Memorial Fund.

On this occasion Dr. Welch was also presented with a specially designed scrapbook containing more than three thousand clippings of press notices of his eightieth birthday, and a specially designed volume containing the letters and telegrams of congratulation addressed to him. He was further presented with a specially designed portfolio containing engrossed greetings from foreign institutions, and three large embroidered silk scrolls from Peiping Union Medical College, in Peiping, China.

This dinner made memorable because of the illustrious physician honored and the outstanding group of contemporary physicians who participated serves as a fitting climax to the national manifestation of honor which has so fittingly been accorded Dr. Welch.

A review of the book "William Henry Welch at Eighty" will appear in the Book Review Section of this JOURNAL at a later date.

COURT ENJOINS NORMAN BAKER OF MUSCATINE

By decision of the Iowa Supreme Court rendered on February 17th, Norman Baker, owner and operator of the Muscatine Clinic, has been permanently enjoined for the practice of medicine without license. This decision comes as a reversal of one made by Judge Ely some months ago in which he found the four associates of Baker guilty of practice of medicine without license and enjoined them from such practice, stating that in his opinion sufficient evidence that Baker was guilty of this charge was not presented. The Supreme Court in its decision indicated that, "The appellee Baker is the owner and proprietor of the Baker institute at Muscatine, Iowa. The Baker institute was established and is maintained for the purpose of treating certain diseases, particularly cancer,

tumors, goiter, prostate gland troubles, stomach ulcers, rheumatism, gall stones and diabetes. None of the parties named as defendants in this action are, or have ever been, licensed to practice medicine in this state. * * * * The secret formula of appellee is a liquid and designated on the treatment cards as 'intra & Int.' No. 1 or No. 2. The Hoxsey formula is designated on the treatment cards as 'powder No. 1.' So far as the record shows, the liquid and powder referred to were the only medicines used in the treatment of cancer, goiter and other diseases. No physician employed at the hospital knew the formula for compounding either the liquid or the powder.

"* * * * A very large per cent of the patients treated were afflicted with cancer * * * * Clearly, if the incident referred to in the testimony of Hoxsey concerning the effect of the Baker treatment upon certain patients is to be believed, then appellee prescribed the medicine, and, in effect, directed the treatment to be administered.

"* * * * None of the treaters were licensed physicians, and except in a few possible instances,

"* * * * The legislature has seen fit to provide that any person engaging in the practice of medicine, without having first procured a lisence, may be permanently enjoined. The duty, upon a proper showing to grant such relief, is imposed upon the court by act of the legislature. It seems to us that the only conclusion to be drawn from the evidence shown in the record is that appellee was continuously engaged in the violation of certain definite provisions of the statutes of this state. Both the letter and the spirit thereof are being violated.

"* * * * The judgment and decree is, therefore, reversed and the cause remanded to the district court for decree in harmony with this opinion, or if counsel prefer, a decree may be entered in this court permanently enjoining appellee from practicing medicine in this state without a license."

In spite of the decision rendered by the Supreme Court in the *Free Press,* a Baker owned paper, under date of February 17th, Baker is quoted as saying: "The decision does not surprise me in the least.

"* * * * This decision will not affect the operation of the Baker Hospital at Muscatine in any manner. Regardless of this decision, I still say that Norman Baker is not guilty of practicing medicine or surgery in the State of Iowa without a license.

"* * * * The Baker Hospital will continue to operate just as in the past. * * * * My attorneys will file a petition for rehearing at once."

AN ADDITIONAL SERVICE TO SOCIETY MEMBERS

Through an arrangement completed with the Cooperative Medical Advertising Bureau of the American Medical Association, we are prepared to furnish our readers with accurate and reliable information relative to pharmaceuticals, surgical instruments and other manufactured articles of interest to the medical profession, which may be used either in your home or office. The Cooperative Bureau is equipped with catalogues covering the market nationally for products of this nature, whereas our files will furnish much information relative to Iowa made and distributed equipment.

Do not hesitate to address your inquiries to us or direct to the Cooperative Advertising Bureau at 535 N. Dearborn Street, Chicago, Illinois. This service will be rendered without cost or obligation. It is our desire that the Journal be of greater service to you.

THE FRENCH NATIONAL COMMITTEE FOR THE PREVENTION OF BLINDNESS

A new society has been organized in Paris patterned after the American National Society for the Prevention of Blindness, which will be known as the French National Committee for the Prevention of Blindness, and will become a part of the International Association.

The French society has announced its scientific program: (1) for the prevention of blindness from infectious diseases; (2) the prevention of industrial eye accidents; and (3) conserving the remaining eyesight of visually handicapped school children.

Dr. F. de Lapersonne, one of the most distinguished ophthalmologists in Europe, has accepted the presidency of the French committee. Dr. de Lapersonne is professor emeritus of the University of Paris and is now president of the International Association for the Prevention of Blindness and vice president of the French Academy of Medicine.

An important phase of the French committee's work will be the control of trachoma in the French colonies of northern Africa and the Near East.

DIETS FOR INFANTS AND CHILDREN

A series of seven diet sheets, covering the diet requirements of the child from infancy through adolescence has been prepared by the pediatric division of the Division of Maternal and Infant Hygiene. Copies of these will be sent gratis to any physician applying for them. They can be obtained in quantity, if desired, at a rate covering the cost.

Communications should be addressed to the Division of Maternal and Infant Hygiene, University of Iowa.

Medical Care of the Indigent in Iowa

In presenting this discussion of the report of the Committee on Medical Education and Hospitals by Dr. Williams and that on the opposite page by Dr. Munger, we are prompted by the belief that the seriousness of the problems involved demand earnest consideration by every member of our Society. Free discussion of a problem involving so many factors cannot fail to result in a more comprehensive viewpoint. It is our hope that before the next meeting of the House of Delegates much constructive thought may be directed towards these problems and a solution equitable to all adopted at that time.

—The Editor.

The present method of caring for the indigent sick in Iowa is, to my mind, far from satisfactory to either the taxpayers or the members of the medical profession. There seem to be two plans, basically different. One is to care for the indigent patient in his own community, by local physicians in a local hospital, the cost to be borne by the county in which the patient lives; the other is to send all such patients to the University Hospital, which is manned by doctors receiving salaries from the state, the cost of such service to be borne by the state. These plans should be carefully studied; first as to efficiency, second as to the advantages to the physicians furnishing the service, and third as to the cost to the taxpayer.

So far as efficiency is concerned the large hospital operated in connection with the medical school might offer some advantages in furnishing specialized treatment in unusual cases, but the hospitals throughout the state are adequate for treating the great majority of the tax paying citizens. Certainly they are adequate for treating the majority of the paupers whose care is paid for by the taxpayer. Efficiency is therefore not a determining factor.

Cost enters materially into the choice of the most desirable plan. The Committee on Medical Education and Hospitals of the Iowa State Medical Society reports that the average cost per patient per day in the hospitals throughout the state is $2.70, while in the University Hospital it is $3.68, and if all special expenses are added, the cost is $4.44. If we add ten per cent for doctors' fees to the cost in other hospitals, it would still be much less than in the University Hospital. The average cost per patient treated in the University Hospital is $116.50, which, to say the least, is high. The committee reports that one-sixth of this sum is for transportation, doctor's examination and incidentals not incurred when the patient is treated at home. This means that last year the taxpayers paid $166,666.00 for the transportation of patients to and from the University Hospital.

It is urged, however, that these patients furnish clinical material for teaching purposes. This is true, but many could be cared for in their own counties and thus furnish the local physicians with clinical material and welcome fees, help to maintain the local hospitals and keep the money in their own communities. Has the local doctor, the local hospital or the local merchant no right to his share in the distribution of the million dollars expended for the medical care of the indigent?

If we assume that these million dollars represent even a minor part of the medical college expense, the total cost is a staggering sum. Adding $300,000, which the present plan is costing us, to $325,000, gives us a total of $625,000 which we are expending each year to graduate less than 100 medical students. Thus, it would seem that the cost to the state of Iowa is more than $6,250 for every graduate, not including the cost of investments or of the two pre-medic years of the medical course.

At the present time, the University Hospital is supported by a state appropriation of $1,000,000, or about $10,000 per county, regardless of the amount of service which each county receives. During the last year Shelby, Sac, Mills, Woodbury and Plymouth counties received $24,230 in service and paid $77,861 in taxes, or more than three times as much as for service received. On the other hand, Johnson, Linn, Webster, Monroe and Scott counties received $217,554 in service and paid only $84,605 in taxes. In other words, it cost the first group of counties nine times as much for the care of their indigent sick as it did the latter group. There is no possible excuse for such inequality as these figures show.

We might assume that the care of the poor is a state and not a county burden and allow each locality to render such bills to the state and not to the county, but so far this has never been done. This plan would at least preclude an unfair distribution of costs among the counties.

It has been suggested that the appropriation be increased $250,000; I suppose on the theory that we need more "state medicine" and that this is the time to relieve our tax burden.

There are at present about 2,000 patients on the University Hospital waiting list, or about one-fourth of the number treated in a year. It would seem to be a wiser plan if a number of these patients could be treated in their local hospitals

(Continued on page 139)

Taxes and Indigents in Iowa

At the annual meeting of the Iowa State Medical Society, held in Des Moines, May 9, 1929, a resolution was passed by the House of Delegates, authorizing the council to appoint a committee on medical education and hospitals, stating our problem as "the delivery of adequate, scientific medical service to all of the people at a cost which can be reasonably met by them in their respective stations of life." A notable start toward the solution of this problem was made when the State Medical Society created the committee on Medical Education and Hospitals; and when Drs. Bert L. Eiker, Arthur W. Erskine and Albert V. Hennesey, together with their executive secretary, Vernon D. Blank, submitted the memorable report of their Herculean task to the House of Delegates at the called session for official review and action, they became entitled, not only to the praise and thanks of the state society, but to encomiums from every man and woman interested in the physical welfare of the people of this great state. Space will not permit a complete discussion of this report but there are, however, a number of ethical questions involved in the whole matter which need discussion by professional men and laymen. Among them, the relation of the medical profession to the public; the effect of such legislation as the Haskell-Klaus law(not the Perkins law), on community welfare, including maternity and infant hygiene; its effect upon the supply of capable physicians for rural communities, and other related subjects, all having to do with the public weal, and which there is now neither time nor space to detail.

What is to become of the family physician, known in rural America as the "country doctor" and the competent surgeon who prefers the country to the city, and some hundreds of thousands of people in Iowa, with their quota of accidents and illnesses, if this modern medical-big-business develops much farther and proves to have been the entering wedge for state medicine?

Does any one think, or do many hope that Iowa can continue in the medical college business on the basis of state indigency? Does any one believe that Iowa, at Iowa City, far removed from the center of its 55,586 square miles, can compete with Chicago, Minneapolis, St. Louis, Omaha and other cities, in the matter of indigent clinical material for teaching purposes? If some better plan than the one in operation cannot be worked out the time will come when the taxpayers will conclude that they had better get their doctors from city colleges, where indigents are indigenous, and do a little home missionary work for themselves.

With the requirement of only one year in the state and county to gain a residence, indigents in other states, maybe in other countries, ought to be glad to cast their lot with a people, who by a very simple process, will take care of them when ill; take them anywhere from one to two hundred miles to a haven of hope, by railroad, automobile, or possibly airplane, furnish bus, taxi and ambulance, hotel, meals, telephone; pay escort's wages, furnish trained nurses, etc., all for the asking. Why not be an indigent? Those who pay the taxes can hardly hope for such solicitude and provision. The state levies a tax on everybody to furnish medical care and hospitalization for those who must first qualify as "indigents" and "become wards of the state." No provision is made for the taxpayer himself, nor is any consideration given to "indigents," "wards of the state," who for one reason or another, cannot be transported to Iowa City. It has been argued that "For the past fourteen years the state assumed the same responsibility for these patients as has been the case in connection with the students in the educational institutions, the inmates of the state penitentiary, et cetera." There are freshmen in our colleges, if not in our high schools, who would resist the argument as wholly untenable and resent the odius comparison. There are poor people in every county in the state who have helped make Iowa what it is, who would die in their tracks before they would qualify as "indigents" and as "wards of the state." There are others who have partaken of the state's charity and who would flinch at the classification if announced at the whist club. There are others who would not be abashed because, as some one has said, "It is one of the weaknesses of human nature which some people find hard to resist, to want to get something for nothing."

E. E. Munger, M.D.
Spencer.

Editor's Note: This article is part of a more general discussion of this problem prepared by Dr. Munger and printed in full by the Spencer *Reporter*, Feb. 5, 1931.

PRESIDENT'S MESSAGE

Councilor Districts Need Revision

The greatest obstacle to the effective functioning of the Iowa State Medical Society is the archaic arrangement of councilor districts. I have heard innumerable criticisms of the present arrangement. I have never heard a voice raised in defense of the present districting, and yet we do nothing about it. It is my strong conviction that the House of Delegates, at the May session, should take prompt and decisive steps to remedy the serious defects and free the state organization from the unreasonable handicaps imposed by the present fallacious system.

The Committee on Constitution and By-Laws has brought forward a suggested plan of redistricting which it proposes should be acted upon by the House of Delegates. (See map and statement on opposite page.) I would urge that every county medical society discuss this matter and if it seems feasible, instruct its delegate to vote in favor of some constructive rearrangement. While the Committee on Constitution and By-Laws has made a definite suggestion as to counties to be contained in the various districts, yet the matter is of course entirely up to the House of Delegates and the best possible plan should be worked out and adopted next May.

The arguments for redistricting have been cited so often that a lengthy statement is not necessary at this time, but prominent among them is the fact that the constitutional requirement that a councilor visit each of his societies at least once a year is entirely too onerous a task in some of our present districts, which extend two-thirds of the way across the state. It is obviously unfair to ask a councilor to devote a large part of the time which he can give to state society activities, in the wasteful business of driving or riding long distances. Many of the ethical, professional and organizational problems of the Iowa State Medical Society can easily be solved if each councilor can be within a one or two hours' drive of every county in his district.

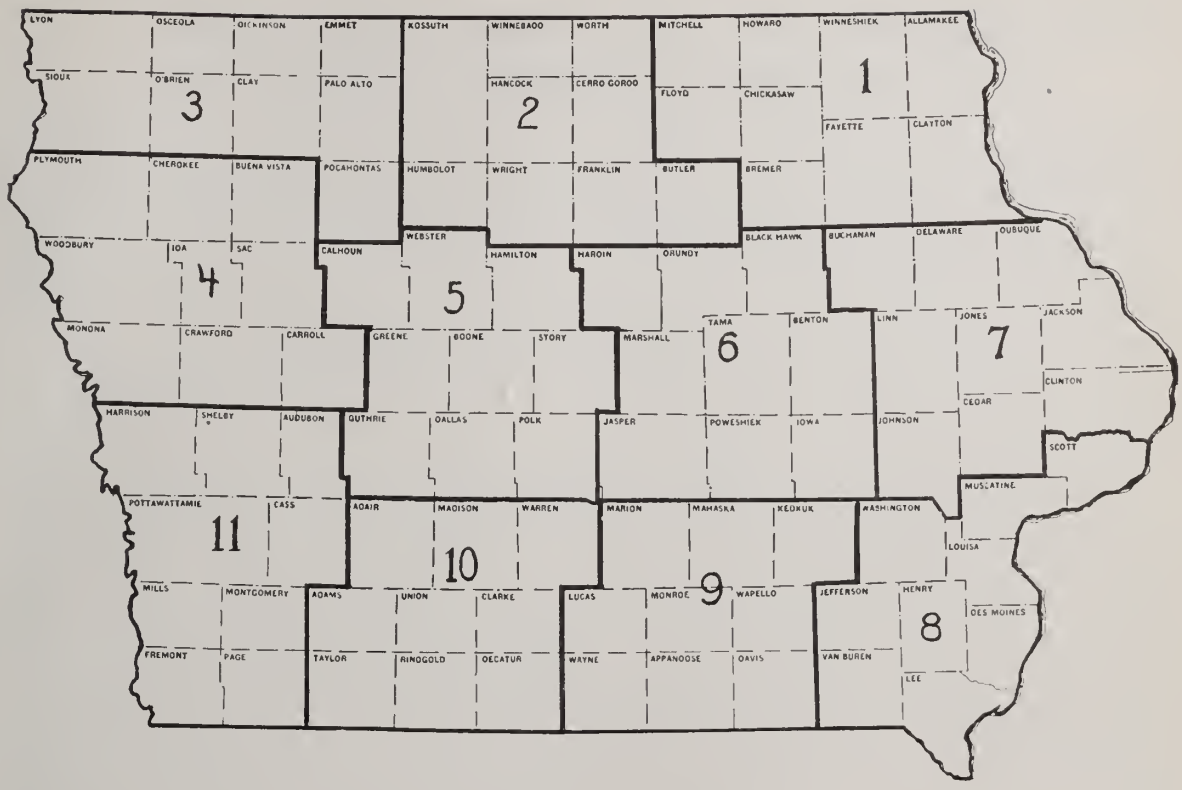
The newly created Speakers Bureau gives another added incentive to the creation of more compact districts, since many of its projected postgraduate activities must be carried on through group meetings.

That an immediate redistricting can be effected is evident from the fact that since the amendment of the Constitution in 1929, when the method of electing councilors was changed and the words, "and such caucuses shall at the same time select the member of the Council for the same district," stricken out, there is nowhere in either the Constitution or By-Laws any reference whatever to the form which the various councilor districts shall take. The Constitution, in Article VIII, provides that there shall be eleven councilors. Nowhere else in the Constitution or By-Laws is there any reference either to the number of councilors or to their various districts. Thus it is obvious that a simple resolution passed by the House of Delegates to create councilor districts will effect the change. If it seems wise to the members of the House to write the provision for councilor districts into the By-Laws, it could still be done during the coming session, since the By-Laws "may be amended at any annual session by a majority vote of all the delegates present at that session, if the amendment be laid upon the table for one day."

Finally, it should be clearly borne in mind that even though there were some sentimental arguments for retaining the congressional districts as the basis for our councilor districts, such traditional procedure will be made impossible by the fact that Iowa is to be redistricted into nine congressional districts instead of eleven.

The Council has in the past few months been increasingly active. The members have shown every willingness to sacrifice and to work for the interests of the profession in this state and it is my strong conviction that we should do everything possible to make their willing sacrifices of greater practical value and to make their work easier and pleasanter, through greater accomplishment in the upbuilding of organized medicine in Iowa.

W. A. Roheb



Committee on Constitution and By-Laws Provides Council Redistricting

At a meeting of the Committee on Constitution and By-Laws of the Iowa State Medical Society, held in the state offices Tuesday evening, February 24, it was unanimously voted that the committee should propose to the House of Delegates a rearrangement of the councilor districts so as to obtain a more compact arrangement and thus promote efficiency in the state organization.

The following resolution was adopted: "Be it resolved that the Committee on Constitution and By-Laws go on record as favoring a redistricting of the state into eleven councilor districts of nine counties each, with a view to facilitating the work of the Council and of the state society, and that a copy of the proposed redistricting be printed in the JOURNAL, together with a map showing the proposed districts."

A suggested resolution to be presented to the House of Delegates was also discussed and it was decided to request that such resolution also be printed in the JOURNAL so that the members of the various county societies and their delegates might inform themselves regarding the proposed changes.

Resolution Proposed for the House of Delegates

WHEREAS, the Constitution of the Iowa State Medical Society provides that there shall be eleven Councilors, and

WHEREAS, neither the Constitution nor the By-Laws make any provision whatsoever regarding the counties comprising each Councilor district, and

WHEREAS, the present Congressional districts, which have for convenience been acccpted as Councilor districts, are to be entirely changed and reduced to nine, and

WHEREAS, the automobile and the improved roads connecting all county seats make practicable the formation of geographically compact districts, and

WHEREAS, the work of the Council can be greatly facilitated by the formation of districts of approximately uniform size and number of constituent counties,

THEREFORE, BE IT RESOLVED: That the House of Delegates hereby fixes the composition of the eleven Councilor Districts of the Iowa State Medical Society, as follows:

District No. 1.—Allamakee, Winneshiek, Howard, Mitchell, Floyd, Chickasaw, Bremer, Fayette and Clayton counties.

District No. 2—Worth, Winnebago, Kossuth, Hancock, Cerro Gordo, Butler, Wright, Franklin and Humboldt counties.

District No. 3—Emmet, Dickinson, Osceola, Lyon, Sioux, O'Brien, Clay, Palo Alto and Pocahontas counties.

District No. 4—Buena Vista, Cherokee, Plymouth, Woodbury, Ida, Sac, Carroll, Crawford and Monona counties.

District No. 5—Hamilton, Webster, Calhoun, Greene, Boone, Story, Polk, Dallas and Guthrie counties.

District No. 6.—Black Hawk, Grundy, Hardin, Marshall, Tama, Iowa, Benton, Poweshiek and Jasper counties.

District No. 7.—Dubuque, Delaware, Buchanan, Linn, Jones, Jackson, Clinton, Cedar and Johnson counties.

District No. 8.—Scott, Muscatine, Louisa, Washington, Jefferson, Henry, Des Moines, Lce and Van Buren counties.

District No. 9.—Keokuk, Mahaska, Marion, Lucas, Monroe, Wapello, Davis, Appanoose and Wayne counties.

District No. 10.—Warren, Madison, Adair, Adams, Union, Clarke, Taylor, Ringgold and Decatur counties.

District No. 11.—Audubon, Shelby, Harrison, Pottawattamie, Cass, Montgomery, Mills, Fremont and Page counties.

The President Says:

Increased Service Demands Higher Dues

At our last meeting of the House of Delegates in Des Moines it was suggested by one of the members of the board of trustees that on account of the extra expense this year it seemed desirable to increase the dues. With this opinion I am in hearty accord; and it is my conviction, as the result of conferences on the matter with various societies and county officers, that such a proposal should meet with general approval. At a recent meeting of the Butler-Bremer County Medical Societies, among other resolutions presented by the committee was the following resolution:

"Resolved: That we realize the enactment of these necessary legislative measures and the carrying on of the work of the State Medical Society involves the need of considerable financial resources to supply these we feel it necessary that the dues of the members be increased."

This has given me courage to briefly discuss the measure of increasing the dues. An investigation has proved that Iowa is paying less dues than any other state in this territory as shown by the following:

Ohio	$25.00	Kansas	$10.00	Minn.	$15.00
Mich.	10.00	S. Dak.	10.00	Wis.	10.00
Ill.	8.00	Mo.	8.00	Nebr.	8.00

Iowa State Veterinary Association..... $10.00
Iowa State Medical Society..... 7.50

Since Minnesota raised her dues to $15.00 a few years ago the profession of that state has been able to secure needed legislation. The most prominent is that of a real desirable and efficient medical practice act. Because of this and other reforms and activities the profession of Minnesota has very materially benefited. I was much interested in learning recently that, contrary to what might be expected, the membership in the Minnesota State Medical Society increased the year after the dues were raised from $7.50 to $15.00.

The work of our Speakers Bureau is far-reaching in its benefits to the profession. The benefits of the Bureau are obvious when we consider the fact that they have been instrumental in introducing the University Extension Courses, in assisting county societies by supplying programs of the best quality and in bringing qualified speakers to lay audiences. This is one of the items responsible for some increase in the expenditures. It is also very obvious that certain of our committees and the board of councilors are especially active in behalf of the medical profession this year, which also adds to the expense.

One of the outstanding committees that has done a splendid constructive work, the report of which was given at a special meeting of the House of Delegates, is another rather large item of expense. It should be known, however, that the committee did not receive one penny of remuneration personally for the sacrifice and time given to their investigation and report.

What do you get in return for your dues paid to the State Medical Society?

1. A medical journal of your own that has grown to be a journal of real merit and interest with possibilities for improvements in the amount of professional papers that it might publish.

2. It gives members a standing in the State Society and the benefits of membership in the A. M. A. The A. M. A. journal as you know is optional.

3. Not the least of the benefits is the individual insurance against malpractice suits, and surely we have a right to be proud of the accomplishments of our Medico-Legal committee.

4. A better individual professional standing and access to our splendid yearly program and to the programs of the county societies that are constantly getting better and more comprehensive.

5. No one questions the benefits of a closer fraternity among physicians nor the benefit contacts with the leaders of the profession from time to time that these meetings give the individual doctor.

6. It seems too, that it is worth while to receive as one does through his membership in the State Society, informative literature relative to our State Board of Health and information regarding our public health campaigns in connection with cancer education and the work of tuberculosis and heart associations, etc., with the service of the State Medical Library.

7. Nor should we neglect to mention that the matter of medical economics now so prominent a subject is one that is given much thought by men of real ability in the State Society. The results of their investigations and deliberations come to us through our State Society membership.

8. The annual meeting of the presidents and secretaries of the county societies of the state is surely a most helpful conference. This year, as you know, the trustees (and we think it was wise) decided they could not bear the expense of such a meeting. We hope in the future this conference can be had and the expense of the conference be provided by the State Society.

9. Another matter to consider is the cost of a medical education; conservatively estimated is approximately $10,000 in cash outlay and seven years of time. Figuring the financial value of the seven years the young medical student puts in before he is ready to practice is $10,000 more. The total investment then approximates $20,000. The only institution that has an interest in or that can in any way advance and protect this $20,000 investment is the State Medical Society which exerts influence and energy to advance and improve its value.

It is my hope that the matter of increasing the dues will be given serious thought and consideration, and that a reasonable increase may be voted by the House of Delegates at its next annual meeting.

SPEAKERS BUREAU ACTIVITIES

Postgraduate Work—In Retrospect

The last meeting of the medical extension courses was held at Oskaloosa, Friday, February 20. This completes part of the Bureau's program for this season. The two courses given dealt with two different phases of the practice of medicine and were given from different pedagogical points of view. The ten lectures in obstetrics were given by one teacher, who discussed a phase of medicine with which all of the hearers had almost daily practical experience. The recent advances in obstetrics, although exceedingly important, have not altered in a radical way the practice which the men had been been taught in their school days. Hence the seed fell in good ground.

The course in cardiology, however, attempted to cover a field which has been greatly modified and enlarged in recent years by the intense productive research work carried on in the last two decades. This course was given as a symposium by a number of men who have made special studies following the newer developments in the different phases of cardiology. Hence the lectures were more difficult for the general practitioner to comprehend since, in many cases, their lack of time had prevented any special studies in this field. However, an attempt was made to have the course so arranged that it would be of benefit not only to the general practitioner but also to those men who were especially interested in diseases of the heart.

The course in cardiology was of an experimental nature, and therefore the plans and details of the courses were not as smoothly or minutely worked out as would have been possible for a more well-established routine. Time was very limited for the preparation of the course. In spite of these handicaps, the practically unanimous enthusiastic endorsement which has come to the Bureau from the participants in these two courses is gratifying beyond words. The 193 physicians who enrolled in these courses are unanimous in their high praise of the course in obstetrics. A few state that they were not as well pleased with the course in diseases of the heart. On the other hand, a greater number expressed themselves exceedingly pleased with the symposial courses on the heart. And from every place where the extension courses have been given, there have come to the Bureau urgent requests for more courses immediately. Consequently, the Bureau feels that the attempt has been one hundred per cent successful and we are convinced that the fields are ripe for the harvest.

We also feel that this success is due entirely to the untiring and enthusiastic cooperation of our Dean of the Medical College and to the excellent work done by his faculty. The medical profession of Iowa has every right to be proud of the splendid work done by the Departments of Obstetrics and Medicine in making these extension courses possible. Here at the office we feel sure that 193 physicians are exceedingly grateful for the splendid work done by Doctor Plass and Doctor Hesseltine, and by Doctor Fred Smith and his associates.

There will be no more extension courses given until next fall. It is planned to give new localities in the state the preference when future courses are scheduled. Preliminary arrangements for such work will have to be made early this spring. Any county or district that wishes to secure this opportunity for its members, should write to the Bureau as soon as possible, as we shall try to take care of the requests in the order in which they are received.

February Placements

Clinton County Medical Society, Clinton. February 10.
J. Carl Painter, M.D., Dubuque—Tuberculosis in Childhood.
John H. Peck, M.D., Des Moines—The Problem of Tuberculosis.
Daniel J. Glomset, M.D., Des Moines—Rheumatic Heart Disease.
Walter L. Bierring, M.D., Des Moines—The Coronary Problem in Heart Disease.

Franklin County Medical Society, Hampton. February 12.
Paul A. White, M.D., Davenport—Peptic Ulcer, General Considerations.
Elmer G. Senty, M.D., Davenport—Peptic Ulcer, General Considerations.

Federated Women's Club, Women's Dept., Chamber of Commerce, Des Moines. February 13.
Vernon D. Blank, Des Moines—Legislation.

Calhoun County Medical Society, Rockwell City. February 19.
H. W. Rathe, M.D., Waverly—Heart.
E. L. Wurtzer, M.D., Clear Lake—Heart.

Polk County Medical Society, Des Moines. February 24. "Medical Insurance"
Mr. Walter St. John, Des Moines—The Agent's Viewpoint.
Martin I. Olsen, M.D., Des Moines—The Medical Examiner's Viewpoint.
Francis R. Holbrook, M.D., Des Moines—The Practitioner's Viewpoint.

Parent-Teacher Association, Grundy Center. February 25.
Arnold M. Smythe, M.D., Des Moines—Communicable Diseases.

Appanoose County Medical Society, Centerville. February 27.
Joseph Brown, M.D., Des Moines—The Story of Menstruation.
H. C. Hesseltine, M.D., Iowa City—The Common Complications Met in Obstetrics.

A. M. A. QUESTIONNAIRE TO COUNTY SECRETARIES

The Speakers Bureau Committee wish to take this opportunity to remind county secretaries of the questionnaires which they recently received from the American Medical Association in regard to the nature and extent of health activities conducted by county medical societies. May we urge you to fill out this questionnaire as carefully and completely

as you can and return it at your earliest possible convenience. The A. M. A. is conducting a very important investigation and your reply is needed. The results of this survey will be of great value to our own state association and to this Bureau in particular in building our future plans.

A NEW FILM

The H. A. Metz Laboratories of New York announce that they have recently completed a motion picture demonstrating the principles of the technic of spinal anesthesia. By animated diagrams and actual operative pictures, this film shows the preparation and administration of the anesthetic, its use in the various types of surgery, and heights of anesthesia. Any county medical society wishing to secure this film for a showing may do so by writing the Bureau to that effect.

SOCIETY PROCEEDINGS

Boone-Story Society

A joint meeting of the Boone and Story County Medical Societies was held in Nevada, Thursday, January 22, and the following scientific program presented: Insulin as Used in the Treatment of Infection, Ross E. Gunn, M.D., of Boone, discussion opened by E. M. Myers, M.D., of Boone, and Bush Houston, M.D., of Nevada; and The X-Ray, Its Uses in Diagnosis, B. T. Whitaker, M.D., of Boone, discussed by F. E. Powers, M.D., of Boone, and Arthur D. Woods, M.D., of State Center.

Cerro Gordo County

The Cerro Gordo County Medical Society held its regular meeting Tuesday, February 17, at the Park Hospital. After a brief business meeting, the following program was furnished by members of the Park Hospital staff: Physical Therapy in Relation to Medicine and Surgery in the Field of Gynecology, Henry D. Holman, M.D.; Some Observations of Different Types of Acute Otitis Media, Howard D. Fallows, M.D.; and Report of Cases, Thyroglossal Duct Cyst, and Carcinoma of Sigmoid, Geo. M. Crabb, M.D.

T. E. Davidson, M.D., Secretary.

Clarke County

Thursday, February 19, members of the Clarke County Medical Society met for their regular monthly meeting in Osceola. The scientific program was furnished by J. N. Goodman, M.D., of Osceola, who read a paper entitled, Simplified Infant Feeding. This included the presentation of a case, a demonstration of method, and with the subsequent discussion, occupied the entire evening.

Clay County Annual Meeting

Results of the annual meeting of the Clay County Medical Society held in Spencer, Saturday, February 7, are: Dr. H. O. Green, president; Dr. J. M. Sokol, vice president; Dr. E. E. Munger, Jr., secretary and treasurer. All officers are residents of Spencer.

Des Moines County

Two Illinois physicians addressed the regular meeting of the Des Moines County Medical Society held in Burlington, Tuesday, February 10. William A. Frymire, M.D., of Monmouth, spoke on Medical Service and Conditions in the Belgian Congo, and Harold M. Camp, M.D., secretary of the Illinois State Medical Society, discussed Medical Education of the Public.

Greene County

The February meeting of the Greene County Medical Society was held at the Hotel Lincoln in Jefferson, Thursday, February 5. After the six-thirty dinner, the following physicians discussed Diseases of the Ear, Nose and Throat: I. S. Buzard, M.D., of Jefferson; Frank E. Cressler, M.D., of Churdan; Roy E. Parry, M.D., of Scranton.

Harrison County Annual Meeting

Dr. H. N. Anderson of Woodbine, was elected president of the Harrison County Medical Society at the annual meeting held in Logan, Friday, February 6. Other officers chosen were: Dr. Walter Cook of Pisgah, vice president; Dr. F. H. Hanson of Magnolia, secretary and treasurer; Dr. C. S. Kennedy of Logan, delegate; and Dr. S. M. Clark of Woodbine, alternate. The scientific program was as follows: The Injection Treatment of Piles, F. H. Hanson, M.D.; The Injection Treatment of Varicose Veins, S. M. Clark, M.D., and Mastoiditis, H. N. Anderson, M.D.

Henry Society Entertains Jefferson and Washington Societies

Tuesday evening, February 3, the medical societies of Jefferson and Washington counties met as guests of the Henry County Medical Society at Mt. Pleasant. Twenty-seven members of the three groups attended the six-thirty dinner, after which the following scientific program was presented: Varicose Veins, W. G. Lessenger, M.D., of New London; Psychotherapy, O. A. Geeseka, M.D., of Mt. Pleasant; Surgery in Diabetes, W. A. Sternberg, M.D., Mt. Pleasant; and Blood Pressure, J. W. Laird, M.D., Mt. Pleasant.

Johnson County

Eighty members of the Johnson County Medical Society attended the regular monthly dinner and meeting Wednesday, February 4, at the American Legion Community Building. A. C. Pfohl, M.D., addressed the group on Acute Intestinal Obstruction, based on clinical experience in the Department of Surgery, discussion opened by I. A. Rankin, M.D.; and J. W. Dulin, M.D., presented Congenital Anomalies of the Abdomen, discussion opened by J. R. Schenken, M.D.

Keokuk County

Members of the Keokuk County Medical Society met in Keota, Monday, January 26, for a dinner meeting. Immediately after the banquet the following papers were read: Ambulatory Treatment of Hemorrhoids and Varicose Veins, Walter B. Phillips, M.D., What Cheer; Some of the Clinical Aspects of Leukemia, Franklin C. Perkins, M.D., Hedrick; Brain Abscess, J. L. Doyle, M.D., Keota.

Kossuth County

Edwin G. Bannick, M.D., of the Mayo Clinic at Rochester, was the scientific speaker at a meeting of the Kossuth County Medical Society held in Algona, Friday, January 30. Dr. Bannick took as his subject, Bright's Disease.

Linn County

The regular meeting of the Linn County Medical Society was held in Cedar Rapids, Thursday, February 12, with H. O. McPheeters, M.D., of Minneapolis, presenting a clinic on Injection Treatment of Varicose Veins and Ulcers.

Monona County Annual Meeting

On February 5, 1931, the members of the Monona County Medical Society met in Ute, for the regular annual meeting of that organization. The following officers were elected: Dr. Paul Ingham of Mapleton, president; Dr. F. J. Stodden of Mapleton, vice president; Dr. E. J. Liska of Ute, secretary and treasurer.

Page County

Fremont county physicians were guests of the Page County Medical Society at a meeting held Thursday, February 5, in Shenandoah. A six-thirty banquet was served at the Delmonico Hotel after which a scientific program was presented.

Polk County

The February meeting of the Des Moines Academy of Medicine and Polk County Medical Society was held in the west ballroom of the Hotel Fort Des Moines, Tuesday evening, February 24. The program, which was furnished by the Speakers Bureau of the Iowa State Medical Society, was on the subject of Medical Insurance. Mr. Walter St. John spoke first on The Agent's Viewpoint; Francis R. Holbrook, M.D., followed with a talk on The Practitioner's Viewpoint, and Martin I. Olsen, M.D., concluded the program with a paper on The Medical Examiner's Viewpoint. The general subject and some of the more specific parts were ably discussed by Doctors Fred L. Wells, Addison C. Page, Albert E. Johann, Frank A. Ely and Thomas A. Burcham. Ninety members were in attendance.

Poweshiek County

Two new members of the Poweshiek County Medical Society furnished the program for the meeting held Tuesday, February 3, in Grinnell. The papers were: Undulant Fever, E. S. Korfmacher, M.D.; and Backache, S. D. Porter, M.D. Both physicians live in Grinnell.

Scott County

Howard L. Beye, M.D., of the State University of Iowa College of Medicine, spoke on Some of the Problems Associated with Empyema, at a meeting of the Scott County Medical Society held Tuesday evening, February 3, in Davenport.

Taylor County Annual Meeting

At a meeting of the Taylor County Medical Society held in Bedford, Tuesday, January 27, Dr. L. T. Reed and Dr. Cecil V. Hamilton, both of Gravity, were elected president and secretary, respectively, for the ensuing year.

Woodbury County

The February meeting of the Woodbury County Medical Society was held Thursday evening, February 19, at the Elks Club. Roy E. Crowder, M.D., of Sioux City, read a paper, Vomiting of Pregnancy.

R. H. McBride, M.D., Secretary.

INTERESTING NEWS
In Brief

The new Hamilton County Public Hospital at Webster City, Iowa, was formally opened for the reception of patients on Tuesday, February 3, 1931. This hospital was made possible by a bond issue voted some three years ago, and has been completed and equipped at a cost of $120,000. The institution will accommodate twenty-nine adult patients and has a nursery with a capacity of six. A well equipped clinical laboratory, x-ray and obstetrical departments are included in the institution.

On February 1st the New Durant Hospital, which is under the management of the Central Clinic of Davenport, was opened with appropriate ceremonies. A banquet was given to which physicians of the surrounding territory were invited. Dr. Henry S. Houghton, Dean of the State University College of Medicine, addressed the group on "Medicine and the Changing Order."

Howard I. M. Hutchins, of Council Bluffs, self-styled "divine healer," has recently been sentenced

on a contempt charge and must pay $50 in court costs and spend one day in the county jail. Hutchins plead guilty to violating an injunction issued against him in August restraining him from the practice of medicine without state license.

In a recent meeting of the Hancock-Winnebago Medical Society held at Garner, definite action of a drastic nature was approved. Their resolution maintained that all accounts older than sixty days would bear 6 per cent interest and would be put in the hands of a collection agency for collection with or without court action.

"Dr." John R. Brinkley of Milford, Kansas, of "goat gland" fame, will open a radio broadcasting station at Monterey, Mexico. Brinkley was debarred from practice by the state of Kansas, and his broadcasting license cancelled by the Federal Radio Commission as a result of its investigation of his notorious "goat gland" clinic.

Official notice has been served by the Denison Board of Health that pupils attending Denison public schools must be vaccinated or be barred from school in order to prevent a possible epidemic of smallpox at this point. Three cases of smallpox are said to exist in Denison at this time.

The hospital trustees of Decatur county in their January session indicated that work would begin at an early date on a county hospital located in Leon, Iowa. The funds for this hospital have already been secured through a hospital tax effective since 1930.

Due to the improved transportation, it has been felt that a necessity no longer exists for the Algona Hospital to operate, and for this reason announcement has been made that the hospital will be closed. Patients in this hospital have already been transferred to the Kossuth Hospital.

Work was started about the first of February on an eight room addition to the Kossuth Hospital, giving this institution some twenty-five to thirty bed capacity. The addition has been required partly due to the closing of the Algona Hospital recently.

The Argonne post of the American Legion has passed a resolution requesting Congress to establish a veterans general hospital in Iowa. A bill to this effect has been introduced into Congress.

Mercy Hospital at Davenport expects to award the contract for a $500,000 addition to the hospital some time during March. Work on the new addition will begin this spring.

PERSONAL MENTION

Dr. George Donohoe, superintendent of the state hospital for the insane at Cherokee, gave a talk on Mental Hygiene at the meeting of the Woman's Club there, January 27.

Dr. Norman F. Miller, associate professor of obstetrics, State University of Iowa, has been appointed professor of obstetrics at the University of Michigan Medical School, according to a recent announcement.

Dr. J. Willis Macy, who has been practicing medicine for the past year and a half in Parkersburg, is leaving to accept a position in the Department of Internal Medicine at the Mayo Clinic, Rochester. Dr. R. E. Cooper, formerly of Minneapolis, has arrived in Parkersburg to take over Dr. Macy's practice.

Dr. John F. Herrick, of Ottumwa, addressed the local Business Men's Hygeia Club at the Y. M. C. A., Thursday, February 19. Dr. Herrick's subject was, "The Fountain of Youth."

Dr. Charles McLaughlin, son of Dr. and Mrs. C. W. McLaughlin of Washington, has been greatly honored by being granted a three year fellowship in surgery at the University of Pennsylvania Hospital in Philadelphia. Dr. McLaughlin's is one of three awards which were made in 1929, two of which had to go to students in the state of Pennsylvania.

Dr. Joseph Kinnaman, formerly deputy health commissioner in Cincinnati, has accepted a similar position in the Iowa Department of Health, and will begin his duties about the first of March. Dr. Kinnaman is a graduate of the University of Iowa College of Medicine, and has served as deputy health commissioner at Topeka, Kansas.

Dr. Frank Earl Bellinger and **Dr. M. C. Hennessy**, both of Council Bluffs, spoke at the meeting of the local chapter of the American Interprofessional Institute, Wednesday, January 28. Dr. Bellinger discussed "What's New in Medicine," and Dr. Hennessy explained the plan under which the local medical society is furnishing medical and surgical attention to the indigent sick.

Dr. S. S. Westly of Manly, was elected vice president for 1931 and president-elect for 1932, of the Mason City Mercy Hospital medical staff, Thursday, January 29. This office has never before been held by a physician living outside of Mason City.

Dr. D. C. Bovenmyer, faculty member of the eye department in the University of Iowa Hospitals, is leaving for Beatrice, Nebraska, where he is to have complete charge of the department of eye, ear, nose and throat diseases at the Heppelin Clinic.

Dr. Oliver J. Fay, Des Moines surgeon, addressed the Employment Managers Club of Des Moines, Monday, January 26, on "Hours and Working Periods in Relation to the Health of Workers."

Dr. J. Dewey Bisgard is planning to leave Harlan for a period of about one year, to accept a position as assistant surgeon in the Billings Memorial Hospital, Chicago.

Dr. Vernon L. Treynor of Council Bluffs, was elected president of the Physicians Casualty Association at the annual meeting of that organization held recently in Omaha.

Dr. Andrew H. Woods, head of the Psychopathic

Hospital at Iowa City, delivered a talk on "Mental Hygiene" Thursday, February 5, before the Coe College faculty at Cedar Rapids.

Dr. S. P. Free, who has practiced at Perry for more than twenty years, has located in Spencer, where he will continue the practice of his specialty, diseases of the eye, ear, nose and throat.

Dr. George A. Bemis was elected president of the Garner Commercial Club, at the annual meeting held Monday, February 9.

Dr. Edward J. Liska, of Ute, who for the past three years has been associated with Dr. J. H. Sherlock, has purchased the latter's interests and will continue his professional practice there, while Dr. Sherlock is preparing to take up special work in a larger place.

Dr. Cora Williams Choate of Marshalltown, spoke before the members of the Business and Professional Women's Club on "Keeping Fit," at their regular meeting Monday, February 9.

Dr. W. D. Runyon of Sioux City, was appointed by Governor Dan W. Turner as the Iowa delegate at the Annual Congress of the Council on Medical Education and Hospitals of the American Medical Association. The meeting was held in Chicago, February 16, 17 and 18.

Dr. R. L. Feightner of Fort Madison, presented the program for the February 17 meeting of the local Rotary Club, speaking on the progress of medicine and surgery during the past decade.

MARRIAGES

Wednesday evening, February 4, Miss Vera Ogren, daughter of Mr. and Mrs. A. Ogren of Algona, was married to Dr. Robert Williams, son of Mr. and Mrs. E. H. Williams of Fort Dodge. Dr. Williams is a graduate of the University of Iowa College of Medicine and is practicing medicine at Lakota, where the young couple will make their home.

DEATH NOTICES

Bassett, Lemuel A., of Boone, died February 7, at the age of sixty-four; was graduated in 1896 from Rush Medical College. At the time of his death he was a member of the Boone County Medical Society.

Haerem, Hans Theodore, of Story City, died February 15, at the age of fifty-eight, as the result of Bright's Disease; was graduated in 1898 from the University of Oslo, Norway. At the time of his death he was a member of the Story County Medical Society.

Powell, Preston, of Adair, died in a Des Moines hospital February 9, at the age of sixty-four, after an illness of two years; was graduated in 1889 from the University of Illinois College of Medicine. At the time of his death he was a member of the Adair County Medical Society.

Shore, Francis Edward Victor, of Des Moines, died February 9, at the age of sixty-eight, after an illness of four weeks; was graduated in 1886 from the University of Michigan Medical School. At the time of his death he was a member of the Polk County Medical Society.

MEDICAL CARE OF THE INDIGENT IN IOWA

(Continued from page 130)

without penalizing the county. The relief workers say, "No, our bill is already paid at the University; why put the county to more expense?" Many an appendicitis, hernia or obstetric case could be treated more economically at home or in the local hospitals, but the county would virtually have to pay twice for the service.

I believe that the problem could be solved if the state was to pay the transportation and examining and incidental fees, and the county pay for the hospital care and the doctor's fee at the University Hospital. This would correct the unequal distribution of costs, be more fair to the local doctors and hospitals and give the University Hospital a much better selection of clinical material. It would encourage better service from the University Hospital and prevent overcharging at home.

I also believe that the commitment of patients to the University Hospital should be taken away from the courts and given to the relief agencies, where it properly belongs. The courts do not and cannot study these cases as thoroughly as should be done.

E. B. Williams, M.D.
Montezuma.

AMERICAN ASSOCIATION FOR THE STUDY OF GOITER

The American Association for the Study of Goiter will hold its 1931 session in Kansas City, April 7, 8, and 9. The association was organized in 1925 by a group of men who believed there was a distinct place for a society whose members would study cooperatively the various medical, surgical, pathological and roentgenological conditions associated with thyroid disease. The phenomenal increase in membership and the character of contributions to the programs of the meetings indicate that the judgment of the organizers of this association was well founded.

The program at the Kansas City session will include talks and papers by men well recognized throughout the country for their progressive studies in goiter. Operative clinics as well as diagnostic sessions at the different hospitals will be helpful diversions to the didactic work. The meeting is sponsored by the Jackson County Medical Society, the Kansas City Southwest Clinical Society, and the Kansas City Academy of Medicine.

Further information concerning the meeting may be secured from the office of Dr. Kerwin W. Kinard, 1102 Professional Bldg., Kansas City.

HISTORY OF MEDICINE IN IOWA

Edited by the Historical Committee

DR. WILLIAM JEPSON, Sioux City
DR. ARTHUR D. WOODS, State Center
DR. FRANK M. FULLER, Keokuk
DR. WALTER L. BIERRING, Des Moines
DR. NORMAN F. MILLER, Iowa City

The History of the Marion County Medical Society*
With Individual Biographies

(Continued from February)

F. M. ROBERTS, M.D., Knoxville

The Marion County Medical Society enjoys the distinction of having had several generations of the same family in membership, as illustrated by the Cornell and Wright families. These biographies are grouped together:

Dr. Norman R. Cornell was born in Steuben county, New York on September 11, 1824, and settled in Knoxville in 1850. He was reared on a farm but early in life made a choice of the practice of medicine as a profession. He pursued his medical studies at Geneva Medical College, New York, was graduated in 1848, and commenced practicing in the village of Ohio, Kentucky. In 1850 he came to Iowa and settled in Marion county, where he practiced medicine until the time of his death in 1912. His practice was so widely and favorably known that his rides took him not only through Marion county but into Warren, Lucas, Monroe and Mahaska counties. History records that during the Civil War he was appointed assistant surgeon of the Twenty-third Iowa Infantry, and the following January was appointed, by Governor Stone, surgeon of the Fortieth Iowa Infantry, serving until mustered out in 1865. The last year he served as brigade-surgeon. His experience in the army increased his reputation, particularly as a surgeon. He was a charter member of the Marion County Medical Society. Probably no pioneer physician of Marion county had a wider acquaintance or the distinction of a skilled physician more than he. His family circle consisted of his wife and seven children. Two of this number, namely: Corwin W., and Lindley P., were physicians and another son, Don D., was a dentist.

It is authentically reported that in the year 1881, Dr. N. R. Cornell, Knoxville, assisted by Dr. J. A. Shrader, Red Rock, performed the first caesarian operation in Marion county. There is no record of what anesthetic was used but the instruments employed were from the small pocket case of the assistant. The operation was done in a very ordinary two-room dwelling on an improvised table. The patient was Mrs. Mary Sinclair, primipara, of Red Rock. She could not deliver her child because of a marked deformity of the spine and hip caused by infantile paralysis. The mother and child survived the operation. The mother made a good recovery but the baby died in about seven hours. This case was reported by Dr. J. A. Shrader in 1882 in the Journal of Obstetrics published in St. Louis. Dr. Harris of Philadelphia wrote Dr. Shrader that this was the third case of its kind operated in Iowa and the second successful one.

Such was an experience of the early eighties which illustrates the outstanding ability and commanding courage of a pioneer physician who did surgery successfully in Marion county.

Dr. Corwin Worth Cornell, son of Dr. and Mrs. N. R. Cornell, was born in Ohio county, Kentucky and died at his home in Knoxville, Iowa, January 12, 1916, from angina pectoris. In 1850, when less than two years old, his parents moved to the then pioneer village of Knoxville, where they remained the rest of their lives. Here "Worth," as he was called, grew to manhood, receiving his education in the Knoxville Public Schools. He received his medical education in Rush Medical College and after graduating located in Knoxville where he engaged in the practice of medicine with his father. He rendered valuable medical service in Knoxville over a period of forty-five years.

He was graduated from Rush Medical College, Chicago, in 1871; was a Fellow of the American Medical Association; a member of the Iowa State Medical Society; a charter member of the Marion County, (Iowa) Medical Society; Secretary-Treasurer of the Marion County Society more than thirty years; Councilor of the Seventh District of the Iowa State Medical Society; Health Officer of Knoxville for many years; U. S. Pension Examiner; Local Surgeon for

* Address before the Marion County Medical Society, December 13, 1928, and subsequent additions.



N. R. Cornell Corwin Worth Cornell Corwin S. Cornell

the C. B. & Q. Railroad and took an active part in all medical society matters.

On October 16, 1883 Dr. Cornell and Mill Lena Schaffner of Burlington, Iowa, were united in marriage and to them were born two children, Miss Aimee, now Mrs. Aimee Chapman, and Corwin S. The latter, after graduating from medical college, was associated with his father in the practice of medicine until the time of the father's death.

In the death of Dr. Cornell the profession which he so signally honored suffered a great loss. The basic principles of his life were ethics, truth and righteousness which made him a physician and citizen held in the highest respect and esteem.

Dr. Corwin S. Cornell was born in Knoxville, Iowa, July 15, 1886, and received his early training in the public schools of the same place. Further education was received at the State University of Iowa, where he was graduated from the College of Liberal Arts in 1909, after which he took up the study of medicine. The first two years of his medical training were taken at the State University and the latter two at Rush Medical College, Chicago, where he was graduated in 1913. He immediately began the practice of medicine with his father and continued to practice with him until the death of the latter in 1916.

Dr. C. S. Cornell was commissioned lieutenant in the Medical Corps, June, 1917, in the World War; called into active service the following August, and was at Fort Riley, Kansas, from August, 1917, to January, 1918. He was in foreign service from January, 1918, until July, 1919. While overseas he did service in the Royal Army Medical Corps Officers' School, England, was in hospital service in Second Northern General Hospital, Leeds, England; did service in First Scottish General hospital, Aberdeen, Scotland; served with the British Expeditionary forces in France and Belgium, and was medical officer in the Nineteenth Field Ambulance and the First Scottish Rifles. He was in the engagements at Ypres front in Belgium and the Somme offensive, discharged with the rank of captain and commissioned as major in the medical section of the Officers' Reserve Corps.

Dr. Cornell, while overseas, was united in marriage to Miss Margaret S. Hardie, of Aberdeen, Scotland, at Montpellier, France, June 12, 1919. Miss Hardie was a British army nurse and saw service for four years, two in Dundee, Scotland, Royal Infirmary and two years in First Scottish General Hospital, Aberdeen, Scotland. They have one son, Corwin David Cornell. Whether or not he will become an M.D. and thereby make the fourth consecutive generation of physicians in the Cornell family is as yet undetermined.

Dr. Cornell is a Fellow of the American Medical Association; member of the Marion County Medical Society, and has been Secretary-Treasurer of the Marion County Medical Society since the death of his father, with the exception of one year when he was president of the county society. He is Deputy Councilor in the Seventh District of the Iowa State Medical Society; Health Officer for the city of Knoxville and local surgeon for the C. B. & Q. railroad.

At this time, January 1, 1930, Corwin S., a grandson of Norman R. and a son of Corwin W., is successfully practicing medicine in Knoxville in the same office occupied by his distinguished ancestors.

Dr. W. E. Wright was born in Fayette county, Indiana, on July 18, 1840, and was reared in this and Franklin counties until 1856 when he moved to Iowa and settled in Marion county. His early life was spent in acquiring an education and teaching. At the outbreak of the rebellion he enlisted in Company B, Third Iowa Infantry, and was in the service three

years. He was wounded on his way to Vicksburg and was sent to the hospital at Keokuk, Iowa, and while there decided on medicine as a profession and commenced study under the direction of the college faculty. After thorough preparation he was graduated from the College of Physicians and Surgeons in 1866. He immediately entered upon the active practice of his profession in Knoxville, Marion county, Iowa, where he rendered valuable medical service until the time of his death, June 19, 1901, which was due to a ruptured gall bladder. He was a charter member of the Marion County Medical Society. He owned and successfully used the first microscope in the county, possessed an excellent medical education and was a very successful practitioner.

Dr. J. R. Wright, son of Dr. and Mrs. W. E. Wright, was born in Knoxville, Iowa, December 5, 1884, at which place he received his early training in the public schools. He was graduated with a Bachelor of Arts degree from the State University of Iowa and spent three years in the medical department of the same university. The last year of his medical training was at University of Louisville, Kentucky, from which he was graduated in 1913. He immediately located in his native state where he has continued in the practice of his profession with the exception of about six months which he spent at Ft. Riley, Kansas, in the army during the World War and the years of 1915 and 1916 when he was assistant superintendent at the State Hospital for Inebriates at Knoxville. He retains a commission as captain in the medical reserve corps.

He takes an active interest in the county and state Medical Societies and is a Fellow in the American Medical Association.

MEMBERSHIP

The present membership of the Marion County Medical Society is nineteen. In addition there are eight physicians who for various reasons are not members of the society. The latter are classified as follows: One retired, two questionable, one a member in Warren County, and four who are eligible. Therefore the total number of physicians in Marion County is twenty-seven. Their names and schools of graduation are as follows:

J. Robert Wright, University of Louisville School of Medicine, Louisville, Ky.

Walter S. Chester, Vanderbilt School of Medicine, Nashville, Tenn.

F. M. Roberts, Barnes Medical College, St. Louis, Mo.

F. Paul Ralston, Creighton School of Medicine, Omaha, Nebr.

H. E. White, Eclectic Medical College, Cincinnati, Ohio.

J. J. Sybenga, Northwestern University Medical School, Evanston, Ill.

Corwin S. Cornell, Rush Medical College, Chicago, Ill.

H. C. Porter, Rush Medical College, Chicago, Ill.

J. W. Anderson, Rush Medical College, Chicago, Ill.

Martin Kramer, Missouri Medical College, St. Louis, Mo.

H. L. Bridgeman, Kentucky School of Medicine, Louisville, Ky.

S. W. Thomas, Kentucky School of Medicine, Louisville, Ky.

E. P. Bell, Drake University College of Medicine, Des Moines, Iowa.

Fred Carpenter, Drake University College of Medicine, Des Moines, Iowa.

H. C. Payne, Keokuk Medical College, Keokuk, Iowa.

W. H. Merritt, College of Physicians and Surgeons, Keokuk, Iowa.

C. I. Fox, Keokuk Medical College, College of Physicians and Surgeons, Keokuk, Iowa.

S. E. Hooper, Keokuk Medical College, College of Physicians and Surgeons, Keokuk, Iowa.

The following are graduates of the State University of Iowa: D. S. Burbank, R. V. Mater, A. S. Shafer, J. F. Gray, Carl Aschenbrenner, Roy Moon, E. C. McClure, A. E. Reiter.

The above list of physicians are graduates of fourteen medical schools, of which but eight are now in existence. About thirty per cent of the physicians of Marion County are from Iowa State University.

The oldest practicing physician of Marion County is Dr. S. W. Thomas, of Melcher, who was born in 1849, graduated from Kentucky School of Medicine 1880, and was licensed to practice medicine in Iowa 1890. The second oldest physician is Dr. M. Kramer of Pella. He was born there in 1854, graduated from Missouri Medical College 1880, and was licensed to practice medicine in Iowa in 1887.

Two physicians have located in our county during the past year, namely, Dr. F. Paul Ralston, Harvey, a graduate of Creighton University College of Medicine, 1926, licensed to practice in Iowa, 1927; and Dr. Walter S. Chester, Knoxville, a graduate of Vanderbilt University 1915.

The splendid service which the medical fraternity of Marion County has rendered the nation when in rebellion or at war, is not surpassed by that of any other county in the state. The stalwart veterans, namely, Drs. N. R. Cornell, W. E. Wright, J. W. Finarty, H. F. Keables, Samuel Druet, and W. H. Axline, all of whom served in the sixties, discharged their duties in a manner to command unstinted praise. With a feeling of deep gratitude for the immeasurable service rendered and the triumphant victory won, we pay tribute to those men who gave medical relief to the maimed and wounded in that titanic struggle between the blue and the gray. There is no enconium too eulogistic to express our profound admiration for those physicians who so valiantly served their country.

Dr. William H. Merritt, Pleasantville, enjoys the unique distinction of having rendered a very different army service from that of any other physician in the county, in that he served in the regular army on the frontier in pioneer days. He enlisted as a private in Co. K, U. S. Infantry, at North Platte, Nebraska, in

1869, and served as such for the five succeeding years. Most of his service was guarding the Union Pacific Railway and government surveys. At various times he served as one of the guardsmen of the United States treasury car from Omaha to San Francisco. On a return trip he was ordered to Chicago at the time of the great fire. During the term of his army service he engaged in several skirmishes with the Indians. He knew Chiefs Spotted Tail and Red Cloud, both Sioux Indians. He was stationed for two years at Fort Fred Steel, Wyoming, and was discharged in 1874 at Spotted Tail Agency, South Dakota. An article giving in detail the experiences of Dr. Merritt would be most interesting.

Dr. Fred Carpenter, of Pella, was the only member who served in the Spanish-American war. He was mustered into the United States service May 30, 1898, served in the Philippine Islands from December, 1898, to May, 1899, at which time and place he was discharged from the service. He took part in five battles and seven skirmishes. He enlisted in the national guard February 19, 1901, and served until 1904. He also had service in the hospital corps and was made hospital steward. His entire record is one of faithful service.

Eleven of the physicians now practicing medicine in Marion county served in the World War.

Dr. Roy Moon, Attica, Captain.
Dr. E. P. Bell, Pleasantville, Lieutenant.
Dr. J. J. Sybenga, Pella, Major.
Dr. C. S. Cornell, Knoxville, Major.
Dr. Carl Aschenbrenner, Pella, Captain.
Dr. H. E. White, Knoxville, Captain.
Dr. F. P. Ralston, Harvey, Lieutenant.
Dr. H. L. Bridgeman, Knoxville, Captain.
Dr. J. Robert Wright, Knoxville, Lieutenant.
Dr. E. A. Bare, Pleasantville, Captain.

We have spoken of those who have answered the call to arms, we have given recognition to those who have contributed of their talents to aid the society, we have spoken generously of the physicians whose crowns have grown silvered in the services of their profession, but this manuscript would be incomplete if there was not special mention made of Dr. E. C. McClure, of Bussey. He bears the distinction of having been for twenty-five years the most regular attendant of both county and state meetings. He has for seven years been the faithful and painstaking delegate from Marion County to the annual meeting of the state society, and for four years has held the honored position of chairman of the finance committee. We point with pride to one of our number who bears such an enviable record.

In conclusion it is fitting to state that the friendly confidence by the laity and proficient service by the relations which exist among our members insures profession.

HANS T. K. HAEREM, M.D. (Univ. of Norway) 1872-1931 An Appreciation

Doctor Hans Theodore K. Haerem died from uremia at his home in Story City, February 15. Doctor Haerem was born in Oslo, Norway, in 1872. It is said of his father that he had more friends than any Norwegian who ever lived. He was graduated from the University of Norway, cum laude, in 1898, took his interneship in the Stananger Hospital from 1898-99, and was in general practice at Lille Hammer from 1903 to 1910. In that year he emigrated to America and began the practice of medicine at Story City, where he practiced from that time until his death. In 1906 he took postgraduate work in Chicago for two or three months and in 1910, he went abroad and took postgraduate courses in medicine in Berlin. He was honored locally by being president of the Story County Medical Society twice, and president of the joint society of Boone and Story counties in 1929. He published an original work dealing with "Diffused Dilatation of the Oesophagus," in the *Norsk Magazin for Laegevidenskaben*, in 1909. He gave a number of talks before his own and neighboring county medical societies, and was to present a paper on hypertension at the coming meeting of the Iowa State Medical Society in May.

American culture and American science have grown from seeds brought over to this country from the various European countries. Doctor Haerem was distinctly a "Norwegian tree"—a true representative of Norwegian culture and Norwegian medical science. Those who knew him admired him for his integrity, his honesty, his thorough knowledge of medicine and his familiarity with science, art and literature. To the people in his community he was known as a cultural leader, as a great enthusiast for all sorts of local clean sports and as a very conscientious and exceedingly able physician. His friends knew him as a brilliant doctor, a splendid scholar, and a charming, loyal friend.

Daniel J. Glomset.

MEETING OF MINNESOTA COUNTY SECRETARIES

The annual conference of Secretaries of the Component Societies of the Minnesota State Medical Association met in St. Paul, Saturday, February 7. This meeting is similar to our own annual County Society Officers Conference. It will be especially interesting to members of our society to note that as a part of the program, the plan of the Iowa State Medical Society for the care of the indigent sick was presented at the conference and generously discussed.

THE WELLCOME FOUNDATION MEDICAL AND CHEMICAL RESEARCH BUILDING

The Wellcome Foundation, Ltd., of London, is about to erect a new medical and chemical research building at the corner of Gordon Street and Euston Road on the site, 225 feet by 135 feet, now partly occupied by their bureau of scientific research. During many years the Foundation has maintained medical and chemical research laboratories, but recent developments have made it necessary to co-ordinate and extend these activities. The new building will furnish the additional accommodation required, and be provided with the most modern research equipment.

THE JOURNAL BOOK SHELF

BOOKS RECEIVED

*ABDOMINO-PELVIC DIAGNOSIS IN WOMEN—By Arthur John Walscheid, M.D.—1000 pages, with 397 illustrations and one color plate.—C. V. Mosby Company, St. Louis, 1931—Price, $12.50.

*A MANUAL OF NORMAL PHYSICAL SIGNS—By Wyndham B. Blanton, M.D., Assistant Professor in Medicine, Medical College of Virginia—Second Edition—246 pages with 49 illustrations.—C. V. Mosby Company, St. Louis, 1930.—Price $3.00.

*CERTIFIED MILK CONFERENCES Held in 1930. Detroit, Mich., June 23-24, 1930—New York, February 3, 1930.

*COMPEND OF BACTERIOLOGY—Including Pathogenic Protozoa—By Robert L. Pitfield, M.D., and Howard W. Schaffer, M.D.—Fifth Edition, with 4 plates and 82 other illustrations.—P. Blakiston's Sons & Co., Inc., Philadelphia, 1930.—Price, $2.00.

*EPISCOPAL HOSPITAL REPORTS—Volume VI—Commemorating the Seventy-Fifth Year of the Hospital of the Protestant Episcopal Church in Philadelphia.—Edited by John H. Arnett, M.D.—with 126 illustrations and 18 tables.—Wm. J. Dornan, Philadelphia, 1930.

*MEDICAL CLINICS OF NORTH AMERICA—Mayo Clinic Number, November, 1930.—(Issued serially, one number every other month.)—Vol. 14, No. 3—Octavo of 261 pages with 50 illustrations.—Per Clinic year, July, 1930 to May, 1931.—Paper, $12.00; Cloth, $16.00.—W. B. Saunders Company, Philadelphia and London, 1930.

*MENTAL ASPECTS OF STAMMERING—By C. S. Bluemel, M.A., M.D., L.R.C.P. (Lond.), M.R.C.S. (Eng.)—Clinical Instructor in Neurology, University of Colorado School of Medicine.—Illustrated with 19 half-tones and one line-engraving.—The Williams & Wilkins Company, Baltimore, 1930.—Price, $2.50.

*MICROBIOLOGY AND ELEMENTARY PATHOLOGY.—For the Use of Nurses.—By Charles G. Sinclair, M.D.—With 102 illustrations, some in colors.—F. A. Davis Company, Philadelphia, 1931.—Price, $2.50.

*PERNICIOUS ANEMIA.—By Leybourne Stanley Patrick Davidson, M.D., F.R.C.P.E., and George Lovell Gulland, M.D., F.R.C.P.E.—With 22 plates and 8 figures in text.—The C. V. Mosby Company, St. Louis, 1930.—Price, $8.50.

*PRIMER ON FRACTURES.—Prepared by the Cooperative Committee on Fractures.—Illustrated.—Published by the American Medical Association, Chicago, 1930.

*RADIUM IN GENERAL PRACTICE—By A. James Larkin, M.D., D.N.B.—Illustrated—Paul B. Hoeber, Inc., New York.—Price, $6.00.

Review appears in this issue.

BOOK REVIEWS

ABDOMINO-PELVIC DIAGNOSIS IN WOMEN

By Arthur John Walscheid, M.D., Director of Obstetrical and Gynecological Department of Broad Street Hospital. 1000 pages, with 397 illustrations and one color plate. C. V. Mosby Co., St. Louis, 1931. Price, $12.50.

This work is very complete, and seems to cover in detail the symptoms and diagnosis of every possible sort of pelvic pathology, written in an interesting and easily understood manner. Its clearness is enhanced by numerous illustrations and case histories to illustrate the point.

While intended primarily for the practicing physician, it is not too technical for use by the advanced medical student and interne, especially if he has seen cases to help him visualize the subject he is reading.

The book is divided into two parts. The first part deals with general etiologic factors, symptoms and examinations. The second part considers separately and in a special way, each organ of the pelvis, discussing the anatomy, physiology, and the symptoms and diagnosis of every pathological condition that might be encountered.

The book is well illustrated and indexed, and contains a complete bibliography. F.W.R.

A MANUAL OF NORMAL PHYSICAL SIGNS

By Wyndham B. Blanton, M.D., Assistant Professor in Medicine, Medical College of Virginia. Second edition. 246 pages with 49 illustrations. The C. V. Mosby Company, St. Louis, 1930. Price, $3.00.

This volume, now in its second edition, exhibits considerable revision and improvement over the former edition published in 1926. Numerous additional illustrations have been incorporated. The volume is presented for the purpose of acquainting the student or practitioner with the normal physical signs encountered in an examination of the patient. The need of such a book is readily appreciated when one considers that the average textbook of physical diagnosis presents both normal and abnormal signs in the same chapter, so that confusion arises in their differentiation. In this treatise all abnormal signs are omitted. The notebook form of presentation has been adherred to for sake of brevity. The volume should prove useful to the practicing physician as a review text.

CERTIFIED MILK CONFERENCES

Held in 1930. Annual conference American Association of Medical Milk Commissions, Inc., and Certified Milk Producers Association of America, Inc., Detroit, Michigan, June 23-24, 1930. Annual conference Metropolitan Certified Milk Producers, Inc., with the Certified Milk Producers Association of America, Inc., New York, February 3, 1930.

This volume contains the detailed report of the transactions of these official associations dealing with the certification and controlled production of milk. The general problems discussed are those of interest to every citizen particularly the physician, who is always vitally interested in matters of this sort. Scientific papers covering such subjects as "Recent Progress in Brucella Infection Studies," Dr. I. Forrest Huddleson, Michigan State College; "The Combined Bactericidal and Antirachitic Effects Induced in Milk by Irradiation," Arthur G. Davis, M.D., F.A.C.S.; "The Vitamins of Milk," Amy L. Daniels, Ph.D., Professor of Nutrition, Child Welfare Research Station, Iowa State University, and other

outstanding reports dealing with the handling of milk and milk products, will be of especial interest to physicians. Other papers dealing with the conditions of stabling and feeding of dairy cattle, etc., would be of more specific interest to those in this special line of work.

COMPEND OF BACTERIOLOGY

Including Pathogenic Protozoa. By Robert L. Pitfield, M.D., and Howard W. Schaffer, M.D. Fifth edition, with four plates and 82 other illustrations. Philadelphia, P. Blakiston's Son & Co., Inc., 1930. Price, $2.00.

This small volume presents in compend form the essentials of bacteriology, including pathogenic protozoa. It is intended as a review volume for students in preparing for examinations. The volume has been revised to include the newer developments in this branch. It is well illustrated and written in a terse, paragraphical form which renders it quite useful for the purpose intended. It is one of a series of twelve compends covering the fundamentals of the medical curriculum published by P. Blakiston's Son & Company.

EPISCOPAL HOSPITAL REPORTS

Volume VI. Commemorating the seventy-fifth year of the Hospital of the Protestant Episcopal Church in Philadelphia. Edited by John H. Arnett, M.D. With 126 illustrations and 18 tables. Wm. J. Dornan, Philadelphia, 1930.

This volume commemorates the 75th year of the hospital's existence. It contains several special articles reminiscent of the early days of hospitals and some articles previously appearing in various medical journals. Some have been prepared especially for this number. Some of the most outstanding contributions of general interest are, "A Sketch of Early Medicine at the Episcopal Hospital," by Elliston J. Morris, M.D.; "Increase in the Cost of Hospital Administration During the Last Seventy-five Years," by Charles H. Gill, Ph.D.; "Surgery in Diabetics," by Emory G. Alexander, M.D.; "Differential Diagnosis of Chronic Inflammatory Lesions of Lungs and Minimal Apical Tuberculosis," by Robert C. Colgan, M.D.; "Lipoid Nephrosis," by James E. Cottrell, M.D.; "Anesthesia in 1852 and Now," by Irvine M. Boykin, M.D.; "Diseases of the Gastro-intestinal Tract Then and Now," by John H. Arnett, M.D.; "The Physiology of the Gall Bladder," by Robert F. Sterner, M.D.; "Seventy-five Years of Gall Bladder Surgery," by H. C. Deave, M.D.; "Vasomotor and Pilomotor Manifestations, Their Localizing Value in Tumors and Lesions of the Spinal Cord: A Report of Thirteen Verified Cases," by Temple Fay, M.D.; "Clinical Studies of Lethargic Encephalitis," by Rufus S. Reeves, "Carcinoma in an Aberrant Thyroid at Base of Tongue," by Astley P. C. Ashurst, M.D., and C. Y. White, M.D.; "The Episcopal Hospital and the Growth of Neurosurgery," by Temple Fay, M.D., and Nicholas Gotten, M.D.; "Fractures—1853 and Now," by Edward T. Crossman; "Orthopedic Surgery in the Last Seventy-five years," by Rutherford L. John, M.D.; "Infectious Osteomyelitis, Differential Diagnosis," by Ralph S. Bromer, M.D.; "The Progress of Ophthalmology in the Past Seventy-five Years in Relation to General Medicine," by Frederick Krauss, M.D.; "The Diagnosis of Acute Mastoiditis," by William R. Watson, M.D.; "Generalized Alopecia, Report of Three Cases with One Necropsy," by George Wilson, M.D., and N. W. Winkelman, M.D.; "Multiple Neuritis Following Carbon Monoxid Poisoning, a Clinicopathologic Study," by George Wilson, M.D., and N. W. Winkelman, M.D. D.M.B.

MEDICAL CLINICS OF NORTH AMERICA

Mayo Clinic Number, November, 1930. (Issued serially, one number every other month.) Vol. 14, No. 3. Octavo of 261 pages with 50 illustrations. Per clinic year, July, 1930 to May, 1931. Paper, $12.00; cloth, $16.00. W. B. Saunders Company, Philadelphia and London, 1930.

This number of the well known medical clinics of North America has been prepared by the staff of the Mayo Clinic. The first three papers are from Dr. Eusterman's Clinic discussing diagnostic problems in such conditions as gastric ulcers, ulceration of the esophagus and carcinoma of the prostate. Other outstanding clinics are those of Dr. S. Franklin Adams, presenting a case of diabetes mellitus with thrombo-angiitis obliterans; Dr. Walter C. Alverez, on mesenteric lymphadentitis in adults a cause of pseudo-appendicitis, indigestion, diarrhea, and arthritis; Paul A. O'Leary on typhoid vaccine in the treatment of neurosyphilis; one by Clifford J. Barborka, on obesity; Dr. Chas. K. Maytum on the differential diagnosis of asthma, and E. G. Wakefield on obstruction of the inferior vena cava. The papers are all prepared in the usual thorough fashion of the clinic writers and present in many cases unusual clinical syndromes or those requiring extra study for their diagnosis.

MENTAL ASPECTS OF STAMMERING

By C. S. Bluemel, M.A., M.D., L.R.C.P. (Lond.), M.R.C.S. (Eng.), Clinical Instructor in Neurology, University of Colorado School of Medicine. Illustrated with 19 halftones and one line engraving. The Williams & Wilkins Company, Baltimore. Price, $2.50.

The first fifty pages of this small volume the author devotes to a discussion of his idea of the underlying causes of stammering. Stammering is an impediment of thought. It is a mental condition rather than a motor defect.

The last one hundred pages are given over to a detailed consideration of a method for the correction of stammering which has been tried out in the Denver Public Schools.

The language is simple and the directions explicit.

For the purpose that this little book is intended —as an aid to the stammerer to better understand his trouble, and as a guide to the teacher—it should be very helpful. L.F.H.

MICROBIOLOGY AND ELEMENTARY PATHOLOGY

For the use of nurses. By Charles G. Sinclair, M.D. With 102 illustrations, some in colors. F. A. Davis Company, Philadelphia, 1931. Price, $2.50.

This volume is prepared following the program outlined as "a standard curriculum" for schools of nursing by the League of Nurses Education. It provides instructions for a forty-five hour course in microbiology and a sixteen hour course in pathology. Part I outlines the lecture courses in these subjects, Part II contains laboratory examinations and quiz questions, while Part III covers elementary pathology including the routine laboratory procedure ordinarily employed in a physician's office. The presentation is as nontechnical as these subjects can be made and retain accuracy. It would seem that this book would be of more value had the author maintained greater brevity in his discussion even to the extent of sacrificing completeness. We appreciate the difficulty of presenting a fundamental and technical subject with brevity. On the other hand, from considerable experience in the instruction of nurses it is our conviction that even in the well organized training school but little time is accorded the nurses for home study. It would be an exception, indeed, to find a school which could permit sufficient time to cover so complete a course. It would further appear that in the presentation of a highly technical subject such as microbiology and pathology that a special glossary of terms conveniently placed in the book would add greatly to its value. This volume is well illustrated and indexed, and presented in paragraphic form which renders it especially useful as a reference book.

PERNICIOUS ANEMIA

By Leybourne Stanley Patrick Davidson, M.D., F.R.C.P.E., and George Lovell Gulland, M.D., F.R.C.P.E. (With appendix on dietetic treatment by Ruth Pybus; introduction by Lawrence D. Thompson, M.D., Assistant Professor of Clinical Medicine, Washington University, School of Medicine.) Twenty-two plates and eight figures in text. The C. V. Mosby Company, St. Louis, Mo., 1930. Price, $8.50.

During the past few years active interest has been stimulated in the treatment of pernicious anemia by the epochal work of American physicians, notably Drs. Minot and Murphy. It is timely then that there should be written an authoritative and complete treatise on pernicious anemia, which will give the student a viewpoint for clinical observation and introduce to him all newer thoughts and practices in the management of these cases. The author discusses the physiology, pathology, bacteriology, etiology, symptomatology, blood changes, prognosis and diagnosis of the condition, and in an extremely useful chapter sets forth the modern treatment of the disease. In an appendix, prepared by Miss Ruth Pybus, will be found numerous recipes for the preparation of liver in various palatable forms, which will go far toward relieving the monotony of the diet and insuring a more faithful observation by the patient.

The volume is well illustrated with colored plates, indicating the blood changes noted in various stages of this disease, which will assist in rendering the differential diagnosis more simple.

PRIMER ON FRACTURES

Prepared by the Cooperative Committee on Fractures, under the auspices of the Section on Surgery, General and Abdominal, and the Section on Orthopedic Surgery in cooperation with Department of Scientific Exhibit of the American Medical Association. Price $1.00. Pp. 55. Illustrated. American Medical Association, Chicago, 1930.

This thin volume of charts presents its subject—the treatment of simple fractures—in a manner unequalled. Simple, clear, forceful and accurate, the illustrations and legends on one page carry more useable information than some books.

A physician, whether he treats fractures daily or only occasionally, should be so familiar with these pictures that, when he sees a roentgenogram of any fracture, the illustration complete in every detail should flash before his eyes; the legends ring in his ears.

Perfect familiarity with this book would be the means of preventing many poor results, relieve many practitioners of the anxiety of a simple thing forgotten. V.A.R.

RADIUM IN GENERAL PRACTICE

By A. James Larkin, B.Sc., M.D., D.N.B. Radium consultant on staffs of Wesley Memorial, German Evangelical, Deaconess, John B. Murphy, Washington Park Community Hospitals, Chicago, and St. Francis Hospital, Evanston; Instructor in Dermatology (Radium), Northwestern University Medical College. Twenty-eight illustrations. Published by Paul H. Hoeber, Inc., New York, 1929.

This is a very well written book giving the technical details of treatment with radium. The author has made no attempt to give the symptomatology or diagnosis of the conditions in which radium is indicated, but has gone into detail as to the technic of application and the reaction that should be expected, as well as the results to be obtained from its use. The text is well and clearly written and anyone who has had the least experience with this therapeutic agent cannot help but profit by reading the book. A comprehensible bibliography demonstrates how thoroughly Dr. Larkin has dealt with the subject discussed. H.C.W.



William Amos Rohlf, M. D.

President

Iowa State Medical Society

1930-1931

The JOURNAL
of the
Iowa State Medical Society

VOL. XXI — DES MOINES, IOWA, APRIL, 1931 — No. 4

IOWA STATE MEDICAL SOCIETY

Organized 1850

Eightieth Annual Session

Des Moines, May 13, 14, 15, 1931

Do not fail to Register. Registration Bureau—Mezzanine Floor, Hotel Fort Des Moines

PROGRAM

OPENING EXERCISES

Wednesday, May 13
8:15 a. m.

Call to Order by the President—
WILLIAM A. ROHLF, M.D., Waverly

Greetings—
MAYOR PARKER L. CROUCH, Des Moines

FRANCIS R. HOLBROOK, M.D., Des Moines
President, Polk County Medical Society

Response—
RAYMOND S. GROSSMAN, M.D., Marshalltown
First Vice-President, Iowa State Medical Society

Presentation of Gavel—
JOHN H. PECK, M.D., Des Moines

SCIENTIFIC PROGRAM

Wednesday, May 13
8:30 a. m.

1. Medical Clinic—
   CAMPBELL P. HOWARD, M.D., Montreal, 8:30-9:15
2. Surgical Clinic—Gall-bladder and Duodenal Ulcer—
   JOHN F. ERDMANN, M.D., New York, 9:15-10:00
3. Rheumatic Heart Disease—
   DENNIS H. KELLEY, M.D., Des Moines, 10:00
   Discussion by JULIAN D. BOYD, M.D., Iowa City
   ROLAND W. STAHR, M.D., Fort Dodge
4. Spinal Anesthesia in General Surgery—
   ALBERT D. NEUBERT, M.D., Fort Dodge, 10:30
   Discussion by JOHN R. JOWETT, M.D., Clinton
   PAUL E. KERSTEN, M.D., Fort Dodge
5. Honesty in Medicine—
   BEN G. BUDGE, M.D., Ames, 11:00
   Discussion by GLADYS A. COOPER, M.D., Red Oak
   ARTHUR D. WOODS, M.D., State Center
6. Some Factors in Prolonged Labor—
   JAMES F. TAYLOR, M.D., Sioux City, 11:30
   Discussion by ARTHUR L. NIELSON, M.D., Harlan
   DELLIVAN M. FUIKS, M.D., Manchester

Wednesday, May 13
1:30 p. m.

7. Address in Medicine—
   CAMPBELL P. HOWARD, M.D., Professor of Medicine
   McGill University Faculty of Medicine, Montreal
8. Preoperative Care—
   J. CHARLES RYAN, M.D., Des Moines, 2:15
9. Postoperative Care—
   JOHN P. COGLEY, M.D., Council Bluffs, 2:30
10. Complications of Duodenal Ulcer—
    JAMES C. HILL, M.D., Newton, 2:45
    Discussion by WALTER K. LONG, M.D., Hampton
    HERVEY F. MASSON, M.D., Washington
11. Postoperative Atelectasis of the Lungs—
    THOMAS A. BURCHAM, M.D., Des Moines, 3:15
    Discussed by ORVILLE B. CHANDLER, M.D., New Hampton
    JOHN L. KESTEL, M.D., Waterloo
12. Retroversion of the Uterus—
    NORMAN F. MILLER, M.D., Iowa City, 3:45
    Discussion by ROBERT KNOTT, M.D., Sioux City

Wednesday Evening, May 13
7:30
West Ballroom

Motion Pictures with Sound

1. Sub-total Abdominal Hysterectomy for Uterine Fibroids—
2. Experimental Gastro-enterostomy—

Address: Medical Economics—
EZRA L. WURTZER, M.D., Clear Lake

Entertainment and Smoker

Thursday, May 14
8:30 a. m.

13. Surgical Clinic—Malignancies of Large Intestine and Stomach—
JOHN F. ERDMANN, M.D., New York, 8:30-9:15
14. Medical Clinic—
CAMPBELL P. HOWARD, M.D., Montreal, 9:15-10:00
15. Compression Fractures of Spine; a New and Simple Method of Treatment—
ARCHIBALD F. O'DONOGHUE, M.D., Sioux City, 10:00
Discussion by FRANK M. KEEFE, M.D., Clinton
VERL A. RUTH, M.D., Des Moines
16. Psychopathic Personality—
ANDREW H. WOODS, M.D., Iowa City, 10:30
Discussion by WILLIAM E. ASH, M.D., Council Bluffs
GEORGE DONOHOE, M.D., Cherokee
17. Hazards in Surgery of Toxic Goiter—
THORALD E. DAVIDSON, M.D., Mason City, 11:00
Discussion by FRANK B. DORSEY, JR., M.D., Keokuk
18. Goiter (illustrated with moving picture films)—
CHRISTIAN B. LUGINBUHL, M.D., Des Moines
Chairman of the Medical Section, 11:30

Thursday, May 14
1:30 p. m.

19. Address in Surgery: Postoperative Abdominal Fistulae (with lantern slides)—
JOHN F. ERDMANN, M.D., Professor of Surgery
New York Post-Graduate Medical School
20. Present-Day Treatment of Pneumonia—
CLULEY C. HALL, M.D., Maynard, 2:00
Discussion by JOHN F. LOOSBROCK, M.D., Lacona
CHARLES F. BRUMMITT, M.D., Centerville
21. The Effect on the Heart of Certain Chronic Diseases of the Lungs—
HORACE M. KORNS, M.D., Iowa City, 2:30
Discussion by HERBERT W. RATHE, M.D., Waverly
BENJAMIN F. WOLVERTON, M.D., Cedar Rapids
22. Surgical Treatment of Malignancies of the Stomach—
JOHN B. SYNHORST, M.D., Des Moines, 3:00
Discussion by GERRIT MARIS, M.D., Hull
23. Address—Indications for the Simple Mastoid Operation—
Guest Speaker, Eye, Ear, Nose and Throat Section.
GEORGE W. MACKENZIE, M.D., Philadelphia, 3:30
24. Nervous Manifestations of Anemias—
JOHN I. MARKER, M.D., Davenport, 4:00
Discussion by LUTHER W. LOVING, M.D., Estherville
LEROY F. CATTERSON, M.D., Oskaloosa

Thursday Evening, May 14

BANQUET

West Ballroom
6:30

Toastmaster—WALTER R. BROCK, M.D., Sheldon
President's Address—
WILLIAM A. ROHLF, M.D., Waverly
Address by the President-Elect—
CHANNING G. SMITH, M.D., Granger
Address by the President-Elect of the American Medical Association—
E. STARR JUDD, M.D., Rochester, Minnesota
Address: The Art of Medicine—
WALTER C. ALVAREZ, M.D., Rochester, Minnesota

Friday, May 15
8:30 a. m.

25. Skin Clinic—
JAY F. AUNER, M.D., Des Moines, 8:30-9:15
26. Surgical Clinic—
E. STARR JUDD, M.D., Rochester, Minnesota, 9:15-10:00
27. The Importance of and Need for More Post-mortem Examinations—
FRANK P. MCNAMARA, M.D., Dubuque, 10:00
Discussion by HAROLD F. SMITH, M.D., Iowa City
EDWARD J. WEHMAN, M.D., Burlington
28. Hydronephrosis—
HENRY F. DOLAN, M.D., Anamosa, 10:30
Discussion by ORA F. PARISH, M.D., Grinnell
29. Study of Incidence and Symptomatology of Ectopic Pregnancy—
MAURICE C. HENNESSY, M.D., Council Bluffs, 11:00
Discussion by JOHN E. O'KEEFE, M.D., Waterloo
Report of House of Delegates
Installation of President

OPHTHALMOLOGY, OTOLOGY AND RHINOLARYNGOLOGY

The Cabin—Hotel Fort Des Moines
Wednesday, May 13
1:30 p. m.

School of Instruction, Dry Clinics and Demonstrations—

1. Chairman's Address—
HARRY H. LAMB, M.D., Davenport
2. Local Anesthesia in Otorhinolaryngology—
DEAN M. LIERLE, M.D., Iowa City
3. Local Anesthesia in Ophthalmology—
CECIL S. O'BRIEN, M.D., Iowa City

3:00 p. m.

4. Dry Clinic: Interesting Cases—
WILLIAM W. PEARSON, M.D., and Associates, Des Moines
*5. Bronchoscopic Demonstration (Methodist Hospital)—
JAMES A. DOWNING, M.D., and Associates, Des Moines

Thursday, May 14
9:00 a. m.

1. Some Results Following the Monocular Occlusion of Each Eye—
LAWRENCE A. TAYLOR, M.D., Ottumwa
Discussion by CHARLIE E. CHENOWETH, M.D., Mason City
ROBLEY R. GOAD, M.D., Muscatine
2. Chronic Suppuration of the Middle Ear—
WAYNE J. FOSTER, M.D., Cedar Rapids
Discussion by GORDON F. HARKNESS, M.D., Davenport
CECIL C. JONES, M.D., Des Moines



Our Distinguished Guests

GEORGE W. MACKENZIE, M.D.,
Philadelphia
JOHN F. ERDMAN, M.D.
New York

E. STARR JUDD, M.D.,
Rochester, Minnesota

CAMPBELL P. HOWARD, M.D.,
Montreal
WALTER C. ALVAREZ, M.D.,
Rochester, Minnesota

3. The Treatment of Intra-Ocular Eye Injuries with Particular Reference to Foreign Protein Injection—
   JOSEPH E. DVORAK, M.D., Sioux City
   Discussion by GEORGE J. PEARSON, M.D., Burlington
   EDWIN W. COBB, M.D., Marshalltown
4. Case of Brain Abscess; Question of Treatment—
   HENRY A. BENDER, M.D., Waterloo
   Discussion by JESSE B. NAFTZGER, M.D., Sioux City
   ELMER P. WEIH, M.D., Clinton
5. Our Poor Relations—
   SIDNEY G. HANDS, M.D., Davenport
   Discussion by JAMES E. REEDER, M.D., Sioux City
   HOWARD D. FALLOWS, M.D., Mason City

1:30 p. m.

6. The Modified Barraquer Cataract Operation—
   OTIS R. WOLFE, M.D., Marshalltown
   Discussion by CYRUS W. RUTHERFORD, M.D., Iowa City
   WILLIAM P. HOFMANN, M.D., Davenport
7. Serious Complications Following the Simple Antra-Meatal Operation; Case Reports—
   SYDNER D. MAIDEN, M.D., Council Bluffs
   Discussion by SUMNER B. CHASE, M.D., Fort Dodge
   GEORGE C. ALBRIGHT, M.D., Iowa City
8. Conservative Treatment of Acute Otitis Media—
   CLARE V. LAWTON, M.D., Grinnell
   Discussion by JAMES A. DOWNING, M.D., Des Moines

3:30 p. m.

9. Address—Indications for the Simple Mastoid Operation.
   GEORGE W. MACKENZIE, M.D., Philadelphia

*Admission to this demonstration will necessarily be limited to the first twelve who sign for it at the Registration Desk. It will run concomitantly with Dr. Pearson's clinic.

ENTERTAINMENT

Wednesday, May 13
7:30 p. m.

Smoker Following Program and Entertainment
West Ballroom, Hotel Fort Des Moines

8:00 p. m.

Auxiliary Card Party
Green Room, Hotel Fort Des Moines
All visiting ladies invited

Thursday, May 14
1:00 p. m.

Auxiliary Luncheon, Wakonda Club
All visiting ladies invited

6:30 p. m.

Annual Banquet
West Ballroom
Physicians, their wives and guests

Courtesy cards to the various golf clubs, provided by the Polk County Medical Society, can be obtained at the Registration Desk by those who wish to play golf.

HOUSE OF DELEGATES

Oak Room—Hotel Fort Des Moines
Tuesday, May 12
1:30 p. m.

Roll Call
Approval of Minutes of Friday Morning Session, 1930
Report of Secretary
Report of Treasurer
Report of Council
Report of Trustees
Report of Delegates to A. M. A.
Report of Standing Committees:

Medico-Legal—
FRANK A. ELY, Des Moines, Chairman
Scientific Work—
WILLIAM A. ROHLF, Waverly, Chairman
Public Policy and Legislation—
THOMAS A. BURCHAM,, Des Moines, Chairman
Constitution and By-Laws—
CHARLES B. TAYLOR, Ottumwa, Chairman
Publication Committee—
RALPH R. SIMMONS, Des Moines, Editor
Finance—
ERNEST C. MCCLURE, Bussey, Chairman
Arrangements—
WILLIAM A. ROHLF, Waverly, Chairman

Report of Special Committees:

Medical Library—
FELIX R. HENNESSY, Calmar, Chairman
Military Affairs—
DONALD MACRAE, Council Bluffs, Chairman
Medical Economics—
JOHN I. MARKER, Davenport, Chairman
Medical Education and Hospitals—
BERT L. EIKER, Leon, Chairman
Historical—
WALTER L. BIERRING, Des Moines, Chairman
Nurses Training—
IRA N. CROW, Fairfield, Chairman
Speakers Bureau—
DANIEL J. GLOMSET, Des Moines, Chairman

Memorials and Communications
New Business
Election of Committee on Nominations

Friday, May 15
8:00 a. m.

Roll Call
Reading of Minutes
Report of Committee on Nominations
Election of Officers
Report of Committees
Unfinished Business
New Business
Adjournment

LOCAL COMMITTEES

ENTERTAINMENT COMMITTEE:

Floyd B. Langdon, Chairman — Frank W. Fordyce
Francis A. Ely — Harold J. McCoy

FINANCE COMMITTEE:

Oliver J. Fay, Chairman — Thomas A. Burcham
Lawrence E. Kelley

COMMITTEE ON CLINICS:

MEDICAL:

Walter L. Bierring — Alexander D. McKinley
William E. Sanders, Chairman — Julius S. Weingart

SURGICAL:

John B. Synhorst, Chairman — Lester D. Powell

HEADQUARTERS



HOTEL FORT DES MOINES

MEETING PLACES

Headquarters—Hotel Fort Des Moines

General Meetings—West Ballroom, Hotel Fort Des Moines

House of Delegates—Oak Room, Hotel Fort Des Moines

Eye, Ear, Nose and Throat Section—The Cabin, Hotel Fort Des Moines

Registration and Exhibits—Mezzanine Floor, Hotel Fort Des Moines

Headquarters for Ladies—Hotel Fort Des Moines

Section Chairmen and Reporters

Section on Medicine—
Chairman, Christian B. Luginbuhl, M.D., Des Moines

Section on Surgery—
Chairman, Roscoe Jepson, M.D., Sioux City

Section on Ophthalmology, Otology and Rhinolaryngology—
Chairman, Harry H. Lamb, M.D., Davenport

Reporter, General Session—
Master Reporting Company, Chicago

Reporter, Section on Ophthalmology, Otology and Rhinolaryngology—
Harry E. Beach, Des Moines

Reporter, House of Delegates—
Dorothy C. McCarthy, Des Moines

OUR GUESTS

Walter C. Alvarez, M.D., Rochester, Minnesota.
John F. Erdmann, M.D., New York.
Campbell P. Howard, M.D., Montreal.
E. Starr Judd, M.D., Rochester, Minnesota.
George W. Mackenzie, M.D., Philadelphia.

Rules for Papers and Discussions

"No address or paper before the Society, except those of the President and the Guests, shall occupy more than twenty minutes in its delivery; and no member shall speak longer than five minutes nor more than once on any subject." "All papers read before the Society shall be the property of the Society." (Excerpts from By-laws.)

Each paper should be typewritten, and deposited with the Secretary when read; if this is not done, it will not be published.

On rising to discuss a paper, the speaker will please come forward and announce his name and address plainly.

Registration

Do not fail to Register.

Please bring your membership card for presentation at Registration Desk.

IOWA STATE MEDICAL SOCIETY OFFICERS AND COMMITTEES 1930-1931

President.....William A. Rohlf, Waverly
President-elect.....Channing G. Smith, Granger
First Vice-President.....Raymond S. Grossman, Marshalltown
Second Vice-President.....W. R. Brock, Sheldon
Secretary.....Robert L. Parker, Des Moines
Treasurer..... E. B. Winnett, Des Moines

COUNCILORS

Term expires

First District—Clyde A. Boice, Washington.....1935
Second District—Anthony P. Donohoe, Davenport.....1932
Third District—Fred F. Agnew, Independence.....1931
Fourth District—Paul E. Gardner, New Hampton.....1934
Fifth District—Aaron C. Conaway, Marshalltown.....1933
Sixth District—Samuel T. Gray, Albia.....1933
Seventh District—John H. Peck, Des Moines.....1934
Eighth District—James G. Macrae, Creston.....1934
Ninth District—A. V. Hennessy, Council Bluffs.....1932
Tenth District—Watson W. Beam, Rolfe.....1931
Eleventh District—William Jepson, Sioux City.....1935

TRUSTEES

Oliver J. Fay, Des Moines, Chairman.....1931
Gordon F. Harkness, Davenport.....1933
Edward M. Myers, Boone.....1932

DELEGATES TO A. M. A.

Donald Macrae, Council Bluffs.....1932
William Jepson, Sioux City.....1932
Thomas F. Thornton, Waterloo.....1931

ALTERNATE DELEGATES TO A. M. A.

Thomas A. Burcham, Des Moines.....1932
John F. Herrick, Ottumwa.....1932
Clyde A. Boice, Washington.....1931

EDITOR OF THE JOURNAL

Ralph R. Simmons.....Des Moines

STANDING COMMITTEES

Medico-Legal

Frank A. Ely, Des Moines, Chairman.....1932
George C. Albright, Iowa City.....1933
F. Earl Bellinger, Council Bluffs.....1931

Scientific Work

William H. Rohlf.....Waverly
Robert L. Parker.....Des Moines
E. B. Winnett.....Des Moines

Public Policy and Legislation

Thomas A. Burcham, Chairman.....Des Moines
W. Eugene Wolcott.....Des Moines
Peter A. Bendixen.....Davenport
William A. Rohlf.....Waverly
Robert L. Parker.....Des Moines

Constitution and By-Laws

Charles B. Taylor, Chairman.....Ottumwa
John H. Peck.....Des Moines
Frederick J. Swift.....Maquoketa

Publication Committee

Ralph R. Simmons, Editor.....Des Moines
Robert L. Parker, Secretary.....Des Moines
Oliver J. Fay, Trustee.....Des Moines
Gordon F. Harkness, Trustee.....Davenport
Edward M. Myers, Trustee.....Boone

Finance

Ernest C. McClure.....Bussey
Ratford F. Childs.....Audubon
Andrew W. Bennett.....Iowa City

Arrangements

William A. Rohlf.....Waverly
Robert L. Parker.....Des Moines
E. B. Winnett.....Des Moines
L. K. Meredith.....Des Moines
Frank W. Fordyce.....Des Moines

SPECIAL COMMITTEES

Medical Library

Felix A. Hennessy, Chairman.....Calmar
Conrad R. Harken.....Osceola
Leroy M. Downing.....Cedar Rapids

Military Affairs

Donald Macrae, Chairman.....Council Bluffs
Harold A. Spilman.....Ottumwa
Earl B. Bush.....Ames

Medical Economics

John I. Marker, Chairman.....Davenport
Ratford F. Childs.....Audubon
Corwin S. Cornell.....Knoxville
James C. Donahue.....Centerville
Isaac E. Nervig.....Sioux City

Medical Education and Hospitals

Bert L. Eiker, Chairman.....Leon
Arthur W. Erskine.....Cedar Rapids
Albert V. Hennessy.....Council Bluffs

Historical

Walter L. Bierring.....Des Moines
Frank M. Fuller.....Keokuk
William Jepson.....Sioux City
Arthur D. Woods.....State Center
Norman F. Miller.....Iowa City

Speakers Bureau

Daniel J. Glomset, Chairman.....Des Moines
Thomas U. McManus.....Waterloo
John C. Shrader.....Fort Dodge

Nurses Training Committee

Ira N. Crow, Chairman.....Fairfield
Robert Crumpton.....Webster City
F. A. Gillett.....Oskaloosa

Vernon D. Blank, Managing Director,
1122 Bankers Trust Bldg., Des Moines

OFFICERS OF WOMAN'S AUXILIARY OF IOWA STATE MEDICAL SOCIETY

President.....Mrs. E. L. Bower, Guthrie Center
President-elect.....Mrs. Channing G. Smith, Granger
First Vice-President.....Mrs. P. B. McLaughlin, Sioux City
Second Vice-President.....Mrs. David H. Hopkins, Glidden
Third Vice-President.....Mrs. W. E. Brown, Cedar Rapids
Fourth Vice-President.....Mrs. C. H. Graening, Waverly
Secretary.....Mrs. Tom B. Throckmorton, Des Moines
Treasurer.....Mrs. W. F. Hamilton, Marshalltown
Parliamentarian.....Mrs. F E. V. Shore, Des Moines

Twin Lakes Auxiliary

President.....Mrs. D. H. Hopkins, Glidden

Upper Des Moines Auxiliary

President.....Mrs. Edith M. Grimm, Spirit Lake
Vice-President.....Mrs. P. O. Nelson, Ayrshire
Secretary-Treasurer.....Mrs. J. B. Knipe, Armstrong

Dallas-Guthrie Auxiliary

President.....Mrs. M. N. Voldeng, Woodward
Secretary.....Mrs. E. L. Bower, Guthrie Center

Jackson Auxiliary

President.....Mrs. F. J. Swift
Vice-President.....Mrs. C. F. Shumate
Secretary-Treasurer.....Mrs. E. L. Lampe

Louisa Auxiliary

President.....Mrs. L. E. Weber, Wapello
Secretary.....Mrs. John H. Chittum, Wapello
Treasurer.....Mrs. T. L. Eland, Letts

Monroe Auxiliary

President.....Mrs. S. T. Gray, Albia
Vice-President.....Mrs. C. N. Hyatt, Albia
Secretary-Treasurer.....Mrs. T. R. Castle, Albia
Parliamentarian.....Mrs. T. A. Moran, Melrose

Polk Auxiliary

President.....Mrs. F. E. V. Shore, Des Moines
Vice-President.....Mrs. Frank Ely, Des Moines
Secretary.....Mrs. George McCreight, Des Moines
Treasurer.....Mrs. John Connell, Des Moines

Washington Auxiliary

President.....Mrs. C. W. McLaughlin, Washington
Secretary.....Mrs. E. E. Blythe, Riverside

Woodbury Auxiliary

President.....Mrs. Prince E. Sawyer, Sioux City
Vice-President.....Mrs. Roy F. Bellaire, Sioux City
Secretary.....Mrs. R. H. McBride, Sioux City
Corresponding Secretary.....Mrs. P. B. McLaughlin, Sioux City
Treasurer.....Mrs. Nathaniel Palmquist, Sioux City

Woman's Auxiliary Iowa State Medical Society

Organized May 9, 1929, Des Moines, Iowa

Second Annual Meeting
Registration Headquarters
Hotel Fort Des Moines

PROGRAM

Wednesday, May 13
8:00 p. m.

Card Party

Green Room, Hotel Fort Des Moines

Thursday, May 14
10:00 a. m.

Opening Meeting

Green Room, Hotel Fort Des Moines

President Mrs. E. L. Bower, Presiding

Invocation—
Rev. W. H. Phelps

Music—

Greetings—
Mrs. Frank Ely, President Polk County Auxiliary

Response—
Mrs. David W. Hopkins, Glidden

Report of Committees—

Reports of Delegates—

Reports of Presidents of County Auxiliaries—

Address: The Function of the Auxiliary in Lay Education.
Dr. George W. Mackenzie, Philadelphia

1:00 p. m.

Luncheon, Wakonda Club

Play Reading—
Reda Rauch Strauss

6:30 p. m.

Banquet, Hotel Fort Des Moines

Physicians, wives, and guests

Friday, May 15
10:00 a. m.

Business Meeting, Woman's Auxiliary

Green Room, Hotel Fort Des Moines

Election of Officers

Appointment of Committees

This program, social and business is for all visiting women. All eligible women are urged to become members.

State Society of Iowa Medical Women

Thirty-fourth Annual Meeting, Des Moines

Tuesday, May 12, 1931

Headquarters—Hotel Chamberlain

Meeting Place—Hotel Chamberlain

Morning Session

9:00 a. m.

Welcome—
Mrs. Edith McElroy, Chairman,
Women's Department, Chamber of Commerce

Appointment of Committees

President's Address—Tubal Pregnancy with Report of Case of Bilateral Tubal Pregnancy

The Section on Handicapped Children at the President's Conference—
Mae Habenicht, M.D., Des Moines

Annual Business Meeting

12:00 m.
Luncheon, Grace Ransom Tea Room
(Guests of Des Moines Chamber of Commerce)

Afternoon Session

2:00 p. m.

Hypertrophic and Atrophic Arthritis; Roentgenological Appearance of Early and Late Cases—
Helen Crawford, M.D.
Department of Roentgenology, S. U. I.

Albuminuria-anuria of Extrarenal Origin; Case Citation—
Mary L. Tinley, M.D., Council Bluffs

The Prevention of Deafness—
Grace Doane, M.D., Des Moines

The Invalid Reaction in Children—
Julia F. Hill, M.D., Baltimore

Unfinished Business

Dinner

7:00 p. m.

Younker's Tea Room

Address:
Amy Daniels, Ph.D., Iowa City

Officers

President.....Florence Johnston, M.D., Cedar Rapids
Vice-President.....Grace Sawyer, M.D., Woodward
Secretary.....Eppie McCrea, M.D., Eddyville
Treasurer...Jeannette Dean-Throckmorton, M.D., Des Moines

Committee on Arrangements

Helen Johnston, M.D., Chairman, Des Moines.
Grace Doane, M.D., Des Moines.
Nelle S. Noble, M.D., Des Moines.



STATE CAPITOL OF IOWA

Des Moines Prepares for the Annual Session

Des Moines, described as "Iowa's own city," is completing plans for the entertainment of the members of the Iowa State Medical Society in a style befitting a professional gathering of this nature. The Society's choice of Des Moines for this meeting was a fortunate one for many important and significant reasons. The central location of the meeting place, together with its unexcelled facilities for the housing and entertainment of visitors assures a generous attendance. Every important railroad entering Iowa, save one, passes through Des Moines, providing nineteen lines of approach by rail, while Iowa's three thousand three hundred miles of paved roads all connect with the capital city. It is possible to reach Des Moines from any point within the state by automobile by a few hours' travel using all-weather roads, while the convention city is accessible to sixty-seven counties by well-paved highways. For the air minded, travel to the city by airplane can be safely recommended, since Des Moines' fine Municipal Airport provides every convenience for the safety and comfort of airplane passengers.

Hotel accommodations meeting the most exacting requirements will be available for all, since all of the Des Moines hotels are within a few minutes walking distance of convention headquarters. It is advisable to write for reservations in advance, when possible, since this will permit the various hotel managements to provide accommodations more exactly fitting individual requirements. The following list of recommended hotels are all strictly modern and fully equipped for your comfort:

The Ft. Des Moines (Headquarters Hotel), Tenth and Walnut Streets, 400 rooms, each with bath. Single, $2.50 up; Double, $4.50 up.

The Brown, Fourth and Keosauqua Way, 250 rooms. Single with bath, $2.00 up.

The Chamberlain, Seventh and Locust, 225 rooms. Single, with bath, $2.00 up.

The Commodore, 3440 Grand Avenue. Furnished apartments. Complete hotel service. Cafe and garage.

The New Kirkwood, Fourth and Walnut, 300 rooms each with bath. Single, $2.50 and $3.00. Double, $4.00 and $4.50.

The Savery, Fourth and Locust Streets, 350 rooms, each with bath. Single, $2.50 up. Double, $4.00 up.

Headquarters for all meetings will be in the Hotel Fort Des Moines. The general meetings will be held in the ballroom of the hotel, where four to five hundred guests may be comfortably seated to both see and hear with ease. Amplifiers will be available so that a greater audience may be served if needed. Sectional meetings, committee meetings, etc., will be cared for in smaller but equally comfortable rooms in the hotel. A general registration desk and information bureau will be located prominently on the mezzanine floor.

Because of the favorable quarters a large number of exhibits will be assured.

A special committee of the Polk County Medical Society and Des Moines Academy of Medicine is fast completing plans for the social entertainment of the members in attendance. One needs but to look back upon the hospitality offered in years gone by to be assured of the pleasure in store at this session. Educational entertainment is assured by a program of distinguished speakers which bids fair to be remembered as one of the most outstanding, if not the most outstanding, offered before the body. The visiting ladies have not been overlooked. The Auxiliary of the Polk County Society have plans for entertainment for every day of the convention, plans which will provide opportunity for making new acquaintances and renewing old ones. Ample time will be permitted for shopping tours or sight-seeing as the visiting ladies may elect. Should a visiting physician care to visit the Des Moines hospitals or public buildings, arrangements should be made for an additional day either before or after the session, since no member can afford to be absent from a program so uniformly helpful as the one planned. Bear in mind, however, that a hand of hearty welcome will be extended to any member of the Society who wishes to visit one of the hospitals, either for the purpose of inspection or professional service.



IOWA LUTHERAN HOSPITAL



IOWA METHODIST HOSPITAL

For those that can spare the time, a visit to the State Medical Library, housed in the State Historical Building on the Capitol grounds, will be well worth while. This library is well equipped to render service to any member of the profession in the state upon request and and visiting physicians will find much of interest in their extensive files. The Polk County Tuberculosis Hospital, near the north boundary of the city, will be of much interest to physicians in institutional work particularly those dealing with tuberculosis.

The local arrangements committee join the officers of the Society in urging each member to complete his plans for attendance at this, the Eightieth Annual Session of the Iowa State Medical Society, Des Moines, May 13, 14 and 15.

Two years ago over one-third of the membership of the society attended the meeting in Des Moines, and it is hoped to exceed that record this year.



MERCY HOSPITAL

CHRONIC MASTOIDITIS*

GEO. C. ALBRIGHT, M.D., Iowa City

The problem of the management of chronic mastoiditis has long occupied a prominent place in the work of otologists. Conservative and operative procedures have each been advocated with convincing enthusiasm. The subject is so broad that time alone demands that in any discussion one or more definite phases must be selected.

It is advisable also, that certain definitions be agreed upon to insure a common starting point for deliberation. To this end, then, let us define a mastoiditis as any otorrhea (Dench).[1] A chronic mastoiditis is any otorrhea persisting, either continuously, or with frequent intermissions, for one year or more (Welty).[2] The only type of management of chronic mastoiditis to be considered here is surgical. Other types may be commendable, but time precludes their presentation.

The surgical treatment of mastoiditis seems to date back to 1774, when Petit, followed by Jassen two years later, advocated what we now regard as antrotomy. At first successful, failures soon followed, so that it was not until 1873 that Schwartz perfected the simple mastoidectomy. Kuester[3] in 1880 is generally accredited as the author of the operation for relief of chronic mastoiditis, known today as the radical mastoid operation. Although a great advance over the simple mastoid for curing chronic mastoiditis, it has two very salient weaknesses. First, it destroys the hearing function in too great a percentage of cases, and second, the otorrhea too often persists after the operation. Hammond,[4] Page,[5] White,[6] Kahn,[7] Halstead,[8] Harris[9] and Hayes[10] are a few who voice these criticisms. Meyer [11] in 1929, after forty years' experience with the radical mastoid, says: "The operation has not brought expected progress." (See also Beck.[12])

In an attempt to overcome these disadvantages of the radical mastoid, many modifications have been proposed by Heath, Bondy, Kuester, Koerner, Politzer, Stache, Schwartz, Barany, Blackwell and others.[13] In general all these modifications are designed first, as an attempt to conserve or improve hearing; second, to minimize the dangers attendant upon the radical operation; third, to shorten the time of postoperative treatment and lessen pain during that period; fourth, to establish drainage from the mastoid into the external auditory canal in contrast to the formation of the single cavity composed of the tympanum and mastoid antrum, as done in the radical operation.

In chronic mastoiditis, as in any other surgical suppurative condition, the prime object is adequate drainage. Can adequate drainage of the mastoid cavity and tympanum be obtained, and healing secured, without destroying the function of hearing? Conversely, does the preservation of hearing subject the patient to health hazards more than enough to offset the advantages of hearing?

From studies of the anatomy of the temporal bone, the conclusion was reached very early in our postgraduate work in otology, that a fairly large percentage of cases which had heretofore been regarded as curable, only through the use of the radical mastoid operation, might theoretically be just as effectually controlled by a procedure much less destructive to hearing, without adding to the patient's health hazard. The desire to secure knowledge of, or to devise a procedure which would obviate the manifest disadvantages of the radical mastoid was born and grew apace, as we saw, following the radical operation with its long periods of painful after care, persistent otorrhea, and remnants of hearing lost. The result of that desire to devise a better procedure, to try it on a series of cases, and to give the technic employed, with results obtained, to other otologists for their consideration is to be presented to you at this time.

In view of the results obtained, it is a matter of sincere regret that priority in publication of the procedure must go elsewhere. Although worked out entirely independently and employed in two of our cases before a search of the literature revealed almost the identical technic, we cannot claim the honor of first presenting it to the profession. This honor must go to Blackwell,[14] who in 1917 published a description of the operation which we have chosen to call the "complete mastoidectomy." Blalock[15] in 1925 also described the same procedure, under the same caption. Lillie[16] just the past year, endorsed "the complete mastoid."

Our series of cases is not large. It represents, however, unselected cases of chronic ear suppuration, which according to the usual indications, should have been subjected to the radical mastoid operation. There are twenty-eight cases. All of these had either intermittent or constant discharge over a period of at least one year. The average duration was seven and three-sevenths years. The maximum duration was thirty years.

Although for several years the idea of a better therapeutic procedure had been gradually forming, it was not until October, 1917, that the motivating impulse which eventually ripened into the procedure we are to present to you, came into our service. In October, 1917, a patient thirty-six years of age with a chronic bilateral otorrhea existing since childhood came to us for examination. He was head of an important department in the

* Presented at the Seventy-ninth Annual Session, Iowa State Medical Society, Marshalltown, Iowa, May 15, 1930.

University. His hearing was reduced to right, spoken voice three feet, left, six feet, making his work of teaching extremely difficult. Examination showed both tympani practically destroyed, with polypi present in both middle ears.

The problem certainly stimulated some healthy thinking. The simple mastoidectomy was clearly inadequate. The radical mastoidectomy, according to the consensus of best opinion would have been clearly indicated, had the condition involved but one ear. However, involving as it did, both ears, it was hardly to be considered. The chances were very strong that the hearing would not improve, that it might even be lost. This would mean loss of position to the patient, and the loss of a very valuable servant to the educational profession of the state. What was to be done?

Here, as in other suppurative procedures, our objective was to secure adequate permanent drainage, with the added objective, preservation of hearing. If this was to be done, an opening must be made and maintained of sufficient size to insure drainage from the antrum of the mastoid into the external world as long as needed. Obviously there are but four ways of doing this: (1) through a mastoid fistula, (2) by forming the antrum of the mastoid and the tympanum into one cavity—the radical mastoid, (3) by making a permanent fistula from the antrum of the mastoid into the external auditory canal—the various modified radicals, and (4) by securing and maintaining adequate drainage through the natural outlet of the antrum, the aditus, into and out of the middle ear, either through a perforated tympanum or later through the eustachian tube, if the drum should close. This latter would obviously be predicated upon the reduction of the discharge to nearly zero, with an accompanying "restitutio ad integrum" of the structures of the middle ear.

Is adequate drainage through the aditus and middle ear theoretically possible? If so, is it practicable? We submit the following:

ANATOMY

The tympanic cavity is fairly large, with a considerable part of it above the level of the annulus tympanicus. This is the attic. It is partly filled by the malleus and incus. The superior ligament that holds up the malleo-incudal articulation divides this attic into an external and internal attic. The head of the incus presents in the aditus, and when viewed from behind, through the antrum of the mastoid, nearly fills the aditus. The external wall of the attic is relatively thick, and is made up of the zygomatic mastoid cells. These cells can be removed external to the aditus with compartive ease and safety as far as the annulus. The vital structures, namely the facial nerve and the horizontal semicircular canal, are mesial to and below this region—in the mesial wall and floor of the aditus. The removal of these zygomatic cells in the external wall of the aditus opens up the external attic, exposes the malleo-incudal articulation, and the ligaments supporting the ossicular chain. With this exposure, attention may now be directed to the internal attic, with good visibility of structures and their relations.

A mastoidectomy, if complete, will remove all carious bone and all infected material from the mastoid process. These sources of danger must be removed, not only distal to the aditus ad antrum, i. e., the antrum and all the petrosal and squamosal cells, but also proximal to the aditus, that is, the cells in the wall of the aditus itself. All carious bone in the aditus wall must be removed. A fairly large fistula can be made from the antrum through an enlarged aditus into the tympanum. The antrum, aditus, and tympanic cavity can in this manner be connected, so as to make them one continuous cavity.

The incision is much the same as for the simple mastoid, except that its upper end is carried somewhat forward over the zygoma. The temporal muscle and periosteum are here cut through and reflected. A simple mastoid exenteration is now done, being rather meticulous to see that all infected bone is cleaned out. Working carefully forward along the tegmen antri, and removing the zygomatic cells of the external wall of the aditus, the head of the incus, in the aditus, is readily found. With a very fine curet the external wall of the aditus is removed, exposing the malleo-incudal articulation. The curet shaft is held parallel to the horizontal semicircular canal, and curetting is done only outward and upward. After the external attic is carefully cleaned out, polypi and granulations in the internal attic may be gently lifted out, watching closely for signs of facial irritation, and being very careful not to disturb the ossicular chain, particularly the stapes.

In those cases where the ossicular chain has necrosed, the enlarging of the aditus is easier, except that greater care must be exercised not to dislocate the stapes. After the aditus is enlarged, and the tympanic cavity cleaned out mechanically, irrigation with normal salt, or some antiseptic solution, from the antrum through the aditus and out through the perforation of the drum, which is always present in chronic otorrhea, is carried out. This wells out through the external auditory canal without the slightest difficulty.

The posterior wound is partly closed and lightly packed with mercurochrome dressings. The usual tympanic pack is inserted. The after care is that

of a simple mastoid, light moist packings that can be done with a minimum of pain and discomfort. The rate of healing also is not much different. One case of twenty years' standing was healed completely with a dry ear in twelve days. The average time was about three or four weeks.

What is the condition after healing of the mastoid wound is complete? The mastoid cavity is filled with granulation tissue. This extends forward into the antral end of the aditus. During the period of healing, nature has thrown up an effective barricade in the bony wall of the cavity, or if the dura or sinuses have been exposed, they are walled off by adhesions Granulation tissue resists infection fairly well. With the walling off of the infection by nature, the only portal of entry for infection into the sinus, dural cavity or the internal ear, is through the wall of the tympanic cavity. We believe that in this cavity, by maintaining drainage until healing is complete by nature, there is less likelihood of an intracranial extension, or of labyrinthitis, than there is with the epidermizing radical mastoid cavity. In our series of cases we have not had a single intracranial postoperative complication. We have had no facial involvement. We have had one labyrinth infection setting in two days postoperative, before nature had time to wall it off. We have not had a single mastoid wound infection, once healing is complete. They may yet occur, though thirteen years without recurrence suggests that it is quite improbable. This technic has been carried out over a period of thirteen years in some twenty-eight cases. May we present some typical case reports to you?

Case 1. F. G. H., male, age 35 years. First seen October 1, 1917, with a bilateral otorrhea since childhood. No labyrinth symptoms, seldom any pain. Hearing Sp. V. right, 3 feet, left, 6 feet. Both ears discharging foul pus. After cleaning out, polypi found in each ear. Radiograms showed small sclerotic mastoids. No cell outlines. Labyrinth test showed normal reaction each side. Conservative treatment tried for six months. The right ear operated May 24, 1918, according to above technic. Large polypi removed from the external and internal attic. Ossicles in good condition. Convalescence uneventful. Hearing July 10, 1918, right, Sp. V. 34 feet, as compared with three feet October 1, 1917. August 7, 1918, complete mastoidectomy left. The dura and sinus were both exposed. Exposure of attic not quite so satisfactory as opposite ear. Through and through irrigation easily done. Recovery uneventful. October 14, 1918, both ears dry, both mastoids completely healed. Hearing normal each ear. This patient has had a few short periods of otorrhea in the right ear, but none in the left. His hearing today is practically normal. He is doing his work without the slightest difficulty so far as his hearing is concerned.

Case 2. H. V., male, age 18. First seen July 27, 1922, with history of intermittent otorrhea, right, many years. Discharge now constant for five months. No complaint except discharge. Examination hearing Sp. V. right, 6 feet. No mastoid tenderness. The canal at its lower end was filled with granulations. Radiogram showed small sclerosed mastoid. Cells completely obliterated. Labyrinth normal. This patient did not accept advice to have a complete mastoidectomy, so conservative treatment was tried. Granulations cleaned out of canal. Three years later he returned with some pain and discharge, and quite marked dizziness. Hearing Sp. V. 2 feet. Drum nearly destroyed. The long process of the hammer could be seen held upward and forward by marginal fragment of tympanum. The fistula test doubtful. Mastoidectomy again advised. Complete mastoid done March 20, 1925. Small mastoid antrum filled with polypi. The aditus enlarged as described. Through and through irrigation into external auditory canal. No facial irritation. Left hospital in ten days. Otorrhea persisted for about six weeks, then subsided. This patient has had occasional otorrhea, but none for three years. March 28, 1930, hearing Sp. V. 40 feet.

Case 3. L. H., female, age 29. Seen August 8, 1925. History otorrhea right for six months, intermittently for life. No particular symptoms except discharge and loss of hearing in this ear. Examination: Hearing Sp. V. 8 feet. Drum almost destroyed. The hammer here was drawn upward in retracted portion of the drum. No labyrinth symptoms. The middle ear showed granulations, but no polypi. Radiogram showed sclerosed mastoid. Some cells in tip. Operation, complete mastoidectomy. The lateral sinus was unusually far forward. The posterior canal wall removed enough to allow the approach to the antrum to be made anterior and mesial to the sinus: Zygoma cells cleaned out, aditus enlarged. Through and through irrigation. This wound closed by the Barnhill method. No packing. Patient was discharged, with ear dry, on the twelfth day. Returned one week later, Sp. V. 24 feet. Four months later hearing normal. April 13, 1930, patient reports ear has remained dry. No symptoms whatever. Examination, canal dry. Drum regenerated. Hammer displaced a little. Sp. V. 45 feet.

Case 4. H. S., male, 25. Entered March 3, 1928, otorrhea left. Had had scarlet fever at age of seven. Ear discharged for one year. Age of 21, ear began discharging again and has been discharging almost constantly since. Has pain each time before discharge begins. No dizziness. Examination: Drum practically destroyed, being a fragment anterior. Foul dicharge. Hearing, Sp. V. at 12 feet. Radiogram shows only a few cells, mostly firm sclerosis. Operation, complete mastoidectomy March 7th. Antrum cleaned out, aditus enlarged. Ossicles largely destroyed. Through and through irrigation. No facial reaction. Lateral sinus exposed. Left the hospital in eleven days. Uneventful recovery. When seen last, November 1, 1929, ear dry, hearing Sp. V. 15 feet.

Case 5. W. S., male, age 13. First seen June 15, 1928, with history of intermittent chronic discharge for past three years. Amount of discharge at present, slight. Some tinnitus, no labyrinth symptoms. Examination: Drum practically destroyed. Some of peripheral part remains. Middle ear, small amount of granulation. Hearing, Sp. V., 4 feet. June 23, 1928, complete mastoidectomy done under gas anesthesia. Bone very necrotic. Inner plate in good condition. Ossicles were not seen. Aditus enlarged. Through and through irrigation. Recovery uneventful. Mastoid completely healed with a dry ear July 8th, seventeen days after operation. Hearing Sp. V. 33 feet. One slight otorrhea, two months after operation, none since, in spite of rather extensive sinus involvement, which was corrected by a Caldwell-Luc. Hearing May 13, 1930, Sp. V. without alarm, 45 feet.

Case 6. M. Y., female, age 24. Seen December, 1924. Otorrhea left, persisting over one year, complication of scarlet fever. Hearing badly impaired. Discharge constant, some dizziness. Examination: Hearing Sp. V. 8 feet. Thick foul pus in canal, large perforation left. Radiogram: Extensive mastoid, cells all blurred. Complete mastoidectomy December 17, 1924. Aditus enlarged. Ossicles in good condition. Patient made an uneventful recovery. Canal dry in one week. Hearing February, 1925, six weeks after operation, Sp. V. 45 feet. Has had one recurrence of otorrhea, May, 1925, none since.

Case 7. D. F., male, age 5½. First seen June 18, 1928. Scarlet fever two years previous, following which both ears discharged, the right for six weeks, the left for nine weeks. The left discharged intermittently for two years. Chief complaint, failure to hear. General health good, except underweight. Very little odor to discharge. Examination: Hearing right 27 feet, left 24 feet. Right drum intact, left canal full of purulent detritis. Conservative treatment tried for four months, with fair results. The amount of discharge became very small. October 20th, acute exacerbation, sagging of posterior canal walls. Radiogram: Mastoids well developed. Involvement both left and right mastoid, although no cell destruction. Simple mastoidectomy done on both sides. Recovery uneventful. Complete healing in about three weeks. June 28, 1929, suddenly developed trouble in the left ear. Auricle standing out from the head. Pronounced symptoms were edema and tenderness over the root of the zygoma, and pus coming out through the posterior canal wall. A complete mastoidectomy advised, and carried out. The necrosis extended through the posterior canal wall external to the annulus. In cleaning, enlarging the aditus, the incus was dislocated. The mastoid, middle ear healed promptly, with no untoward symptoms. Hearing May 7, 1930, right 40 feet, left 50 feet.

Case 8. Miss L. C., female, age 34. Seen June 1, 1927, otorrhea right. Patient had had a simple mastoidectomy, right, in 1919, with intermittent foul otorrhea since. Hearing badly impaired. Examination showed the right drum practically destroyed, with polypi in the opening. Hearing, Sp. V. 18 feet. Fistula test very suggestive. Conservative treatment tried from June, 1927, until September, 1928. Developed symptoms of labyrinthine irritation, nystagmus, past pointing and tendency to fall to the right. Advised to have X-ray and enter hospital. Radiogram showed cells at the external posterosuperior portion of the mastoid and in the root of the zygoma. Complete mastoidectomy done September 24th. The aditus enlarged. Some facial irritation when seeker was passed over the roof of the tympanic cavity. No facial irritation following operation. At first no labyrinth symptoms, but on second day developed definite vertigo, nystagmus, nausea, vomiting. Nystagmus first directed toward the sound side, later to the affected side. Patient had rather stormy convalescence, owing to labyrinthitis. Was able to be out and around in one month. Went to her home in Chicago in November; saw Dr. Shambaugh, who reported labyrinthitis had completely subsided. Hearing lost.

Case 9. L. G., male, age 11. First seen January 28, 1929. Scarlet fever at two years of age, with a bilateral otorrhea almost constantly since. The right ear a little more constant than the left. Discharge may subside for a time; if so, usually pain before starting to discharge again. Examination showed foul otorrhea each ear. The right drum, large perforation central. The left same. Hearing Sp. V. 15 feet, each ear. Radiograms show well developed mastoids, but breaking down of cells. Complete mastoidectomy done on both sides, February 7, 1929. Mastoid wounds healed readily. Patient left hospital in one week. Ears were dry in three weeks. Has had some recurrent otorrhea in both ears, particularly the right since operation. No symptoms of bone involvement. General health excellent. Hearing March 29, 1930, Sp. V. right 24 feet, left 45 feet.

Case 10. Mrs. J. K., female, age 48. First seen June 19, 1923, with a history of pain and discharge in the right ear. Marked impairment of hearing, tinnitus. Had had a mastoidectomy left, five years previous. Examination: Hearing, Sp. V. one foot each ear. Polypi right tympanic cavity. Radiogram: Small sclerotic mastoid. Patient hospitalized one week. Symptoms no better. Complete mastoidectomy right. Patient made a rapid, uneventful recovery. Hearing greatly improved two weeks after operation. April 9, 1930, hearing Sp. V. right 45 feet.

Case 11. Mrs. H. C., female, age 65. History of having had a mastoidectomy right, twelve years ago, complicated by brain abscess. Patient diabetic. Present illness acute otitis media right, which had ruptured spontaneously before patient seen. Otorrhea very profuse. Conservative treatment tried on account of diabetes. Symptoms, however, did not abate. December 11, 1926, a complete mastoidectomy was done. Dr. A. W. Bennett prepared patient with insulin and glucose. The aditus carefully cleaned out. Granulations were removed from the external attic. Through and through irrigation. Moist mer-

curochrome dressings. Patient made a very satisfactory recovery. Canal was dry, wound healed completely in less than four weeks. Hearing when last tested, three months after operation, was Sp. V. 27 feet.

In conclusion, the complete mastoidectomy, which is a simple mastoidectomy, plus the enlargement of the aditus ad antrum, by removal of the zygoma cells externally, has in our hands yielded very satisfactory results in cases of chronic mastoiditis. It has these advantages as compared to the radical mastoid: (1) Retention of hearing is much more probable. There was only one case in which hearing was not improved. In a large percentage there is marked improvement in hearing. (2) Otorrhea is less frequent and less troublesome than following the radical mastoid. (3) The period of postoperative treatment is shorter, and the treatment much less painful. If for any reason, a radical mastoid is later deemed advisable, it can be readily done.

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Dr. George J. Pearson, Burlington. Dr. Albright has given a complete and satisfactory résumé of the past and present in the treatment of chronic mastoiditis. We hope his procedure does not foretell the limitations of the future, for it still falls short of perfection, which is the ideal we strive for. Many ear conditions, including chronic mastoiditis, progressive deafness and tinnitus, never have been treated with uniform satisfactory results. To preserve life is necessary, to preserve hearing is desirable. To get a dry ear is likewise desirable but is the least important; though in a small community a wet ear hurts the reputation of the attending physician worse than the death of the patient.

We agree with Dr. Albright that the complete mastoidectomy is not as safe from future complications as the radical mastoid, but as he has said, the radical can be done secondarily, so there is every reason to attempt the complete mastoidectomy first. A great many of us have done the complete mastoidectomy without calling it such when we have had a badly necrotic, acute mastoid, as well as in the chronic mastoid. The mechanics and theory of the complete mastoidectomy are sound and in practice it works out better than it sounds.

Contributing factors to the success of the complete or any other mastoidectomy are the cleaning up of any pathology in the nose and throat and careful regulation of the patient's environment, habits of life and resistance. It is true that the bum seems to get along better than the richest man in town, but that is due to the difference in vitality of the two classes. The patients who pamper themselves in health lessen their resistance. Both classes need increased pampering when sick and it is more difficult to improve the conditions of the privileged class.

The technic of the operation may be modified to suit the individual's preference. Some operators are more adept with certain instruments than others. Modification here is permissible, as in the simple mastoidectomy. I like the curette better than the burr if the bone is not sclerotic, but in these old chronic cases the cortex is often very sclerotic. Grossman of Berlin found that chiseling the sclerotic bone of a mastoid produced considerable shock, as evidenced by the blood pressure and pulse variations in a large series of cases. The use of the burr overcomes this shock. The objection to the motor driven burr is the heating of the bone and consequent devitalization. This can be adequately controlled with sterile water or normal salt.

It has been our experience that the chronic mastoid, when originating in childhood, has been an underdeveloped mastoid. The inflammatory process and sclerosis have limited the extent of the cells.

Consequently more precaution is necessary in exenteration of the cells to avoid hitting vital structures, especially the lateral sinus. The X-ray picture in some instances locates the sinus perfectly but in others, due to the sclerosis, the picture does not show so well.

I like the rubber tube drain instead of the moist packs for after treatment. The only advantage it has is that it does not have to be changed and so is less painful. The tendency to a fistulous tract left by it on removal does not complicate this type of mastoidectomy as it does not need to completely fill in. We all have our preferences for antiseptic dressings. I would like to hear from someone on the use of the antigen dressings. I like acri violet; in fact I have attributed some nice results to its use. Probably cleanliness of the wound and good hygiene for the patient do more than any antiseptic.

Dr. Sydner D. Maiden, Council Bluffs. A new type of treatment has been presented in a very thorough and capable manner, and deserves our discussion.

Chronic mastoiditis is a condition that theoretically should not exist, but we are living in a practical world, and in spite of all we can do, the chances are our successors may still have these cases to contend with.

Just what are you going to do when called upon to attend one of these cases? One of two things —you are either going to treat them or operate. I grant that a few will respond to treatment, and they should be treated, depending on the individual case, but the majority will eventually demand surgery, and what do we have to offer them in surgery?

A patient submitting himself to an operation of this character expects a cure, and by that I mean, that he wants to be free from discharge, or any possibility of intracranial complication later, and would like to be able to hear at least as well as he did before the operation. Now unless you take plenty of time right at this point to explain to the patient and his family just what you are confronted with, what you are going to try to do, and what the probabilities are in the way of results, you may be unjustly criticised and even abused in the end. I think it is very important that we should take the patient into our confidence and tell him what he is up against, and have it understood just what the possibilities are.

Having decided to operate, you have one of several operations to choose from. Where you have but one ear involved and the hearing destroyed, or practically so, it is going to be a matter of obtaining a dry ear, but where you are trying to preserve the hearing either in one or both ears, then your responsibility is very great and your choice of operation is very important.

If you decide to use the technic that Dr. Albright has presented, I am sure you will be surprised at the very good results you will be able to obtain; results that from the standpoint of preservation, and even improving the hearing, as well as obtaining a dry ear, you would not expect if what we were taught fifteen or twenty years ago were true. At least that has been my experience.

I have been using a technic similar to the one described for the past eight or ten years. I was not aware of the fact that I was deviating from any recognized procedure, only that I was performing a very thorough and complete mastoidectomy in cases that ordinarily would have been subjected to the radical operation, giving special attention to the region about the middle ear, making sure the pneumatic bone was destroyed and pathology removed thoroughly without disturbing the structures in the middle ear itself.

You can accomplish everything that you can with your radical operation, unless you have necrosis or extensive pathology in the middle ear itself that will not respond to any sort of treatment other than complete exenteration. Just because you have pathology in the middle ear does not justify a radical operation. You can get good results with extensive pathology. It has been my policy to refrain from doing the radical operation except in cases of cholesteatoma involving the middle ear, or in cases where the condition of the middle ear structures are so necrotic that good results would be improbable. Occasionally you have to do a radical operation later, but these cases are so few and results obtained by the lesser operations are so satisfactory that I think you are justified in trying the complete mastoidectomy. You are not subjecting the patient to an especially hazardous operation, and you are saving him from a long, tedious period of after care.

Of course these patients should have the nose and pharynx made as free as possible of any pathology, and you should build up the general resistance.

There is one adjunct that I have been using in this past year, and I have only used it twice, that is, zinc ionization, and in both instances I was able to obtain a dry ear—with one treatment in one case and following the second treatment in the other. I think this procedure worthy of a trial where indicated.

Dr. George C. Albright (closing): Regarding the question of cholesteatomata which was brought up, their presence does not in my opinion form an indication for the radical mastoid. Polvogt (Archives Otol. 9:597, 1929) refers to the work of Siebenmann, Nager, and others who show that cholesteatomata were present in the mastoid cavity within three weeks after an acute exanthem, i.e., scarlet fever. Going back to the pathogenesis of cholesteatoma, we know it is a proliferation of the epidermis of the external auditory canal, and of the outer layer of the tympanum. This proliferation forces its way through the opening in the tympanum, forming a tumor in the middle ear.

Answering Dr. Howland's question directly: Yes, I would regard the complete mastoidectomy as the operation of choice, because the aditus will be closed in by granulation tissue, the epidermis will cover over this, forming a complete barrier against future infection of the aditus and mastoid scar.

Dr. Pearson in his discussion said, "I agree with the essayist that the complete mastoidectomy is not so free from complications as the radical." This is not quite my position. I tried to make the point very clear that I regard the complete mastoidectomy to be just as free from intracranial complications as the radical, because if you have a middle ear left open until nature can throw up a defensive barricade, as it always does in the presence of an infection, there is not very much chance of it getting into the inner ear, or into any other part of the cranial cavity.

Dr. Maiden said that if the patient had one ear in which the hearing was good, and the hearing was practically destroyed in the other ear, the only thing desired was a dry ear. I had one case that came in with hearing, spoken voice, one foot each ear. One ear had had a simple mastoidectomy done three or four years before. What had been her good ear had been affected for only about four weeks. The complete mastoidectomy was done. This was six years ago. She was in my office three weeks ago for a check on her hearing. The ear that had had the simple mastoidectomy was still, spoken voice, one foot. In the ear that had had the complete mastoidectomy, hearing was normal. I believe that Dr. Maiden will agree with me that ears are a good deal like dollars, two are better than one, if you can have them.

AIDS IN DIAGNOSIS, FROM THE OPHTHALMOLOGIST'S VIEWPOINT

CHARLES C. WALKER, M.D., Des Moines

My purpose is to bring to you something practical. I have nothing especially new to offer. My paper will be more in the nature of a review of some diagnostic points which come within our specialty. As diagnosis is the most important branch in medicine, a paper like this is not out of place.

We as ophthalmologists have to do with a highly developed organ which is intimately connected with the general system through its nerve and blood supply. It is said that the eye presents more signs and symptoms indicative of a systemic lesion than any other organ. It is the most important single organ from a diagnostic standpoint. The oculist is often able to make a diagnosis of some remote disease long before the internist or the neurologist.

To cover this subject thoroughly would take volumes. It will be possible for me to touch upon only a few points and that in a rather hasty and incomplete way.

Just imagine a hypothetic case. The first thing which attracts our attention is a spontaneous nystagmus. What then is the clinical significance of a spontaneous nystagmus? Both eyes are connected with the labyrinth through the vestibular nerve, postlongitudinal bundle, and third, fourth and sixth cranial nerves. These tracts are definitely known.

Clinical evaluation is often difficult because spontaneous nystagmus can be produced by various organs. The chief ones, in order of their importance, are: (1) the labyrinth, (2) the brain stem and (3) the eyes. A practical division of spontaneous nystagmus, therefore, is otologic or labyrinthine, neurologic or brain stem, ophthalmologic or ocular. If we can determine the organ which produces the nystagmus, we have also determined the cause, prognosis and treatment.

Both labyrinth and brain stem spontaneous nystagmus are labyrinthine in type, the former being due to a lesion of the peripheral end organ (crista, macula or its nerves), the latter to a lesion in the brain stem.

We therefore recognize an ocular or non-labyrinthine spontaneous nystagmus and a labyrinthine nystagmus.

Two questions arise: (1) Is the spontaneous nystagmus labyrinthine or non-labyrinthine in origin? (2) If labyrinthine, is it a central or a peripheral lesion? To make a differential diagnosis is not always possible, but in the majority of cases a fairly accurate diagnosis can be made by inspection alone. That is without the aid of the more technical and time consuming examinations, namely, turning and caloric tests, etc. By inspection we can observe the following points, which are aids in the differential diagnosis between the two types (labyrinthine and ocular):

1. *Type or Form of Nystagmus.* A combined horizontal rotary, or vertical rotary or purely vertical nystagmus with labyrinthine dizziness is labyrinthine in origin, while a diagonal or purely vertical nystagmus without labyrinthine dizziness is ocular in origin.

2. *Associated Eye Movements.* Labyrinthine spontaneous nystagmus always has associated eye movements, even if the ocular muscles are paralyzed. If eye movements are disassociated, then it is always an ocular nystagmus.

3. *Dizziness.* Labyrinthine nystagmus always is accompanied by labyrinthine dizziness. (Turning or tactile dizziness.) Ocular nystagmus may be accompanied by dizziness but is of a different type. (Weavy earth, spots before eyes.)

4. *Inversion of Experimental Optical Nystagmus.* In cases of labyrinthine nystagmus, the umbrella test of Brunner shows a nystagmus opposite to the direction of turning, which is normal. Ocular spontaneous nystagmus may be in the same direction of turning, or of the perverted type. (First with, then against, or no nystagmus, etc.)

5. *Degree.* We recognize three degrees of nystagmus.

a. First Degree—When the nystagmus is present when looking in the direction of the quick component.

b. Second Degree—When the nystagmus is present when looking in the direction of the quick component and straight ahead.

c. Third Degree—When looking in the direction of the quick component, straight ahead and toward slow component. Third degree nystagmus is usually labyrinthine nystagmus, while the first and second degrees may be ocular.

6. *Permanency.* Spontaneous nystagmus of short duration or changeable nystagmus indicates a labyrinthine type. Life-time nystagmus is nearly always ocular.

7. *Suppression of Spontaneous Nystagmus by Experimentally Induced Nystagmus.* The labyrinthine kind is suppressed or altered, while the ocular nystagmus is not changed. (In these cases it is often necessary to determine the irritability of the labyrinths by the falling tests.) Rotate patient, then have him walk; if labyrinths are irritable he will stagger or fall.

8. *Direction of Nystagmus.* Nystagmus is named after the quick component which is, unfortunately, a misnomer, for the slow component is the ear pull. All labyrinthine nystagmus is directional, that is, it has the quick and slow components. If there is no direction then it is an ocular nystagmus.

9. *Amplitude.* Amplitude we recognize as small, medium and large. The extreme indicates ocular nystagmus.

10. *Frequency.* Frequency is either slow, medium or quick. The extremes of frequency speak for ocular nystagmus, while medium frequency speaks for labyrinthine.

It is often difficult to differentiate between peripheral and central labyrinthine nystagmus. These points are helpful:

1. In the peripheral type the intensity of the nystagmus corresponds directly to the intensity of the dizziness. That is, with marked dizziness there is marked nystagmus. In central labyrinthine nystagmus, the nystagmus may be marked and the dizziness slight, or the dizziness may be severe and the nystagmus slight.

2. In peripheral lesions the patient usually falls toward the slow component and is dependent upon position of the head. In central lesions the patient may fall toward the quick component and is independent of the position of the head.

3. Nystagmus and paralysis of the recurrent laryngeal nerve speaks very strongly for a lesion in the pons, where the vagus fibers run close to the vestibular nucleus.

4. A purely rotary, purely horizontal or vertical nystagmus with dizziness is quite certain to be central labyrinthine spontaneous nystagmus. The combined form, horizontal rotary or vertical rotary, indicates a peripheral labyrinthine nystagmus, for it is this combined form of nystagmus which is seen in lesions of the peripheral end organ.

5. *Permanency.* A peripheral spontaneous labyrinthine nystagmus is of short duration (few days to few weeks). A central spontaneous nystagmus is of longer duration—weeks to months, even years, and is changeable. (Very important.)

6 *Diplopia.* Diplopia is not present in ocular and peripheral labyrinthine nystagmus. If present, it indicates a central lesion.

Anisocoria. Let us examine our case for pupillary reflexes. To do this, it is important to have equal illumination in each eye, or better yet, reduced illumination, for in too bright light the consensual reaction is often equal to direct reaction. It is the difference in the intensity which causes the reflex. Our hypothetical case has unequal pupils, the left slightly larger than the right. Does anisocoria always mean a disease of the central nervous system? It used to be taught that all unequal pupils are pathalogic and rather a bad prognostic sign. We know that anisocoria occurs in healthy individuals and is not always indicative of a disease of the central nervous system. If the pupil reacts promptly to direct light, then anisocoria is not a disease of the central nervous system. The anisocoria then may be a congenital anomaly or a lesion of the cervical sympathetic nerve, which is a pathologic anisocoria, but a harmless one. If the inequality is only slight it may be due to unequal illumination of the two eyes or unequal adaptation of the two retinae to light, or very rarely, to unequal refraction of the two.

In our case the pupillary reaction is impaired in the left eye, which means a disease of the central nervous system. The pupillary reflex test is very delicate and an early sign in many diseases of the nervous system, often recognized long before any other neurologic symptoms are present. Recently I was told by a soft-light lens advocate that he had seen in the past year nine cases of contracted and immobile pupils relieved by non-glare lenses, the immobility being due to glare-spasm of the sphincter irides. Such a condition is not possible.

Can we localize the lesion? If we illuminate the normal right eye we get a normal consensual reaction of the left pupil, proving that the motor branch of the reflex arc, the association fibers, the sphincter irides, are normal. Therefore our lesion must be in the sensory branch of the arc, which

may be anywhere from the rods and cones to the external geniculate bodies.

To localize the lesion more accurately we should know: (1) visual acuity, (2) fields, and (3) condition of the fundus. We will assume the visual acuity is 20/40 for distance and reads only J IV. Such a disproportion between distance and near vision is strongly suggestive of a central scotoma. The peripheral fields are normal, thus ruling out a lesion of the optic chiasm and tract, in which case we would have a homonymous hemianopia or hemianopic scotoma.

The campimeter shows a relative central scotoma for white and colors. A central scotoma means one of two things, a central chorioretinitis or a retrobulbar neuritis. The fundus examination with white and red-free light is normal, thereby ruling out a macular lesion. We have localized our lesion somewhere between the globe and optic foramen.

It is possible to localize the lesion still more accurately. The retinal vessels enter the optic nerve 12 to 15 m.m. back of the globe. If the lesion, therefore, is anterior to the entrance of the vessels, the papilla would show blurred outline, engorged veins, etc. In a lesion back of the entrance of the vessels the papilla would be normal, as stated in this case. The lesion therefore is back of the entrance of the retinal vessels and anterior to the optic foramen. Suppose our patient had a pupil immobile to the direct and consensual reaction. The lesion then would be either in the oculomotor tract or the association fibers. With a lesion in the oculomotor tract, the convergence reaction would be abolished, while with a lesion in the association fibers, the convergence reaction would be normal—a typical Argyll-Robertson pupil.

FIELDS

In late years a growing interest has been shown in perimetry in this country, yet the importance of the subject warrants an even wider interest. To interpret field changes a knowledge of the anatomy of the pathways is essential. Since the days of Bjerrum and Roenne, peripheral fields alone are no longer sufficient, but the whole visual surface must be surveyed, not only with white objects, but with colors as well. Quantitative perimetry means the mapping of the visual fields with different size test objects. Fields taken with one size only are no more accurate than the visual acuity would be if taken with one size letter. Much can be learned from carefully and accurately taken fields. Perimetry is to the subjective examination what ophthalmoscopy is to the objective examination. Fields are essential in localizing lesions along the visual pathways. I shall point out a few field changes in lesions along this pathway.

THE RETINA

The retina is composed of two chief elements, the photochemical stratum, or the rods and cones. and the conducting stratum, or the ganglion cells and nerve fiber layer. A lesion of the recipient elements produces a field defect about equal to the size of the lesion and located in the field corresponding to the lesion, usually round or oval in shape. These field defects are much exaggerated in dim illumination, the blue field going first. On the other hand, a small lesion of the conducting fibers near the disc margin may produce a very extensive field defect, corresponding not to the site of the lesion but to the area supplied by the nerve fiber bundle which is injured. The peculiar arrangement of the nerve fiber layer is very important for the perimetrist. Field changes of the nerve fiber bundle type are typically found in glaucoma. By the knowledge gained through the newer perimetry, our conception of glaucoma has been greatly advanced, for through perimetry the extent of damage done can be ascertained, the rate of progress of the disease watched, and the success or failure of the treatment evaluated as by no other means. On the nasal side of the vertical line passing through the optic papilla, the nerve fibers are radially arranged and pass in straight lines from the disc to the retinal periphery. There is no horizontal raphé on the nasal side.

A lesion at the disc margin on the nasal side will cause a cuneate or fan-shaped field defect in the temporal field with its apex joining the blind spot and its wider part in the periphery. The size of the defect is naturally variable, depending upon the numbers of fibers caught. Quite different is the course of the fibers on the temporal side of the papilla. Here the fibers take an arcuate course, arching above and below the fixation point, but no fibers passing to the other side of the raphé, the horizontal line extending from the blind spot to the periphery. The main features in glaucoma fields are, of course, depressions, but some parts, owing to their anatomic location, suffer first and most.

When we think of glaucoma fields the names of three outstanding ophthalmologists naturally come to our minds; namely, Bjerrum, Seidel and Roenne. These men have given us the early field changes in glaucoma, and the field defects are named after their discoverers, Bjerrum scotoma, Seidel's sign, and Roenne's nasal step. Seidel's sign is a sickle-shaped extension of the upper and lower ends of the blind spot and is, perhaps, the very first field defect found in glaucoma.

This sign is due to a nerve fiber bundle lesion at the upper or lower margin of the disc, where many fibers and the larger blood vessel trunks

enter, causing a greater thickness at the disc margin. With an increase of tension, naturally these fibers would suffer first, producing the Seidel's sign. As the disease progresses, Seidel's sign develops into an arc-shaped defect below or above the fixation point called Bjerrum scotoma, which is always curved and comet-shaped. When both the upper and lower defects are present we then have a ring-shaped scotoma. The continuation of the Bjerrum scotoma to the periphery produces the nasal step of Roenne. According to some, it is the first sign in glaucoma but Roenne's sign without the enlarged blind spot is hard to explain. All the scotomata are relative at first and later become absolute. The one peculiar thing in glaucoma is that the color fields are not disproportionate in degree as they are in many diseases.

OPTIC NERVE

The main diseases of the optic nerve are the retrobulbar neuritides. The chief field defect in lesions of the optic nerve is a central scotoma. More accurately caeco-central scotoma with little or no peripheral contraction. While this is true in most lesions of the optic nerve, there are some exceptions to the rule. The outstanding exception is tabetic optic atrophy, in which the peripheral field goes first, followed by the internal isopters as red, blue and very small white. Central vision remains good for a long time. In quinine poisoning the peripheral fields also are contracted, with good central vision.

CHIASM

The classical field change in chiasmal lesions is a bitemporal hemianopia. There are many variations from the classical textbook picture, however, and if the oculist waits until this stage the best changes for his patient have already passed. We must keep in mind that the lesion is a progressive thing, so are the fields. Two types are quite frequently found, the scotomatous and the non-scotomatous type. In both types the first change is in the upper outer temporal quadrant, the so-called temporal slant. The peripheral field for test objects as small as 1/330 may be normal, yet the central isopters for 1/2000 show an outer upper quadrant defect.

In the scotomatous type a central scotoma develops at the apex of the upper outer quadrant. This scotoma enlarges upward and the peripheral field downward until the field breaks through. A similar change occurs in the lower temporal quadrant, first for the smaller 1/2000 objects, and later the larger ones, until a typical temporal field defect is produced. Color fields are similarly changed and often first recognized because they make up the internal isopters fields.

In the non-scotomatous type the peripheral field changes are similar to the scotomatous type, except that the scotoma is absent, the earliest defect demonstrable is within the 30 degree circle, and the isopter for 1/200 does not encircle the blind spot as it normally does. As the disease progresses larger test objects, 2/2000 or 1/330, will show outer upper quadrant depression. The usual progression is to the lower temporal quadrant, producing a typical hemianopia, but great varieties of field changes occur. All depends upon the direction of the growth of the lesion at the chiasm. The upper nasal quadrant may become involved before the lower temporal, thereby producing a horizontal hemianopia. Bitemporal hemianopia may change to homonymous, etc. Total blindness or almost normal fields in one eye with quadrant defects in the other eye and many other atypical defects may be encountered in chiasmal lesions.

OPTIC TRACTS AND OPTIC RADIATION

Here again we have two quite characteristic diagnostic aids to localize the lesion either below the external geniculate bodies or above them. The characteristic field in tract lesions is a homonymous hemianopia. If the field defects are incongruous, with no sparing of the macula, the lesion is most surely a tract lesion; that is, below the external geniculate bodies. If the field is congruous and the macula spared, the lesion is above the external geniculate bodies, for in this part of the visual pathway the fibers from the corresponding points of the two retinae lie very close together. The field defects occur simultaneously and are always of the same size and in the same position in each field. Lesions in the visual center of the cortex produce congruous homonymous quadrant hemianopia.

The visual cortex is the central retina, so called because the localization of the fibers is the same. The fibers from the upper part of the retina go to the upper lip of the calcarine fissure. The fibers from the extreme nasal side of the retina cross completely and go to the extreme anterior end of the calcarine fissure. A lesion here will produce a characteristic field defect, the loss of the so-called temporal crescent. The macula is represented on the very tip of the occipital lobes, so it is possible to have complete blindness from a single lesion involving the two maculae, as they are situated very close together. Gunshot wounds or hemorrhage may do this.

I have endeavored in a rather rambling way to call your attention to the clinical evaluation of spontaneous nystagmus, the great importance of perimetry and the clinical importance of anisocoria.

There are many here who can enlarge on some phase of the subject and bring out many points not possible in the paper.

Discussion

Dr. John H. Tait, Des Moines. I wish to compliment the essayist on bringing this very interesting and intensely practical paper before our section. I heartily agree with him that we as ophthalmologists have the opportunity in many cases of calling attention to many general diseases before either the neurologist or the internist can make a diagnosis. It behooves us therefore, if we are to retain our place in the field of medicine, to be constantly on the alert lest we pass by some important symptom which may enable us to make a diagnosis the lack of which might mean non-recovery to our patient.

Barany claims that in one-half of normal persons a strong lateral deviation of the eyes is attended by a slight nystagmoid movement but these are about equal for all extreme angles of vision. Labyrinthine nystagmus movements are of unequal rapidity and are intensified by looking in the direction of the quicker movement. In nystagmus in organic disease of the brain and cerebellum the movements are persistent and practically equal in rapidity in each direction.

Nystagmus may be acquired in any condition which greatly impairs the vision, especially in childhood. Corneal and lenticular opacities, retinitis and choroiditis often precede it. It is often present in miners who work in poor illumination, with an abnormal position of the eyes which leads to fatigue of certain eye muscles. It is almost a cardinal symptom in insular sclerosis and hereditary Frederich's ataxia. Cerebellar tumors, tumors of the corpora quadrigemina and optic thalami lead to a nystagmus. It occasionally accompanies sinus thrombosis; meningitis; meningeal hemorrhage; certain cerebral hemorrhages, softenings and tumors. Rarely it accompanies hysteria.

Our essayist has brought out very nicely the differential diagnosis between purely ocular nystagmus and aural nystagmus.

Anisocoria: In view of recent investigations we are now led to regard certain differences in the size of the pupils to be non-pathologic. Uhthoff says, "Non-pathologic pupils are round and react normally to ordinary stimuli which is usually not the case in pathologic pupillary inequality."

Recent wide dilatation of one pupil with no disease of the eye lead one to suspect an installation of a mydriatic. Inequality of the pupils may occur in widely dissimilar refraction of the eyes, monocular blindness, aneurysm, pulmonary tuberculosis, dental disease, sinusitis, trauma, and diseases of the nervous system as tabes, disseminated sclerosis and paretic dementia.

Fields: Adequate examination of the fields of vision may often lead one to a diagnosis before changes have taken place in the fundus which are visible by means of an ophthalmoscope. Thus we see that the mapping of the field serves as a subjective examination. As we know, the use of the red or green test object determines a disease of the conductive apparatus, while blue shows a disease of the perceptive apparatus for it has been shown that vision for these colors is lost in these types of diseases.

Examination with the Bjerrum screen allows field examination at a greater distance hence it enlarges defects and thus it is a finer test than the perimeter. Position of the head where the nose, shaggy eyebrow, or an eyelid do not interfere is important in the taking of fields for these may lead to great errors in the findings.

Perhaps it might not be amiss to recount some of the changes found in the field examination as a review:

I Peripheral Group
- A. Concentric Contraction
  1. Retinitis Pigmentosa
  2. Genuine Atrophy
  3. Posterior Neuritis and Choked Disc
  4. Later stages of Choked Disc
  5. Later stages of Glaucoma
  6. Peripheral Choroiditis
  7. Hysteria
- B. Sector Loss
  1. Vessel Diseases — Embolism of vessel, Thrombosis of vein, Tubercular thrombophlebitis of the retinal veins.
  2. Glaucoma, i.e. Nasal Step
  3. Genuine Atrophy when section is degenerated
  4. Detachment of the Retina
- C. Hemianopic Defects
  1. Lesions of optic tract in or behind the chiasm
  2. Tabes Atrophy (not regular)
  3. Intracanicular lesions (not regular)

II Scotomata
- A. Central
  1. With visible changes in the macula
     a. Central Choroiditis
     b. Retinitis
     c. Senile changes of macula
     d. Myopic changes of macula
     e. Black spot in myopia of Fuchs
     f. Hemorrhage
     g. Coloboma of the macula
     h. Perforation of the macula
  2. Retrobulbar neuritis
     Involves papillomaculo bundle
- B. Paracentral
  1. All enlargements of blind spot
  2. Medullated nerves
  3. Coloboma optic nerves
  4. Choroiditis around optic nerve
  5. Choked disc
  6. Glaucoma
- C. Ring Scotoma
  1. Retinitis Pigmentosa
  2. Familial
  3. After severe blinding and fatigue of eyes

Again we thank the essayist and the section for their attention.

Dr. H. I. McPherrin, Des Moines: The subject matter of this title could cover volumes, but, since the essayist has limited his discussion to three phases, I will limit my remarks to the same.

First, I wish to congratulate Dr. Walker on the concise and practical way in which he has presented the subject. I can add nothing other than to emphasize some of the essential points brought out in the paper.

As ophthalmologists and otologists, we appreciate the prominence which nystagmus has attained as a diagnostic sign in diseases of the vestibular system. It is an objective sign and permits of a localization of the lesion in this complicated apparatus.

In a given case of spontaneous nystagmus, the first thing to determine is its type. Is it ocular or vestibular? If vestibular, is it peripheral in the ear or central in the brain? If ocular the components are equal and usually in a horizontal plane. This is due to the eyes trying to find the clearest point on the fovea for fixation. Nystagmus, due to the vestibular apparatus, is a distinct entity, and occurs only in its disturbance. In its typical form, it is a horizontal, rotatory series of jerks of the eyes. It may be oblique or vertical. It has two components, a slow and a quick return.

In practical oto-neurologic work the question to decide is, whether a spontaneous labyrinthine nystagmus is peripheral or central. The peripheral labyrinthine nystagmus shows a constant relation to dizziness, both being equal in their intensity.

In the central labyrinthine nystagmus, we often see an opposite relation, namely, great amplitude and long duration, unaccompanied by dizziness. In acute diseases of the labyrinth, the patient falls or has a tendency to fall in the direction of the slow component. In diseases of the central vestibular system, falling occurs in the direction of the quick component. Furthermore, the direction of the falling, in labyrinthine affections is dependent on the position of the head, not so in central affections.

Anisocoria, or unequal pupils, is a fairly common finding. It is reported by some authorities to affect as high as ten per cent of persons. While it is often pathologic and is always to be regarded with suspicion there seems to be no question but that it may occur in perfectly healthy persons or those suffering from functional neurosis. It is my personal opinion that where we find slight inequalities existing but the response to light both direct and consensual and the response to accommodation normal, no especial significance is to be attached to the findings. If on the contrary, we find irregular, immobile pupils to the direct and consensual reaction, we are dealing with a pathologic condition, common in a great many cerebrospinal diseases.

Fields: On reviewing the literature, comparatively little has been written on this subject, in fact, perimetry has not been employed routinely by the rank and file of ophthalmologists in this country. As Dr. Walker has stated, perimetry is to subjective examination what ophthalmoscopy is to the objective examination. Only those changes of macroscopic size are open to inspection, while the smaller microscopic lesions cannot be seen by the ophthalmoscope. It is in the latter type of lesion, that a field of vision is of great importance. In theory, the charting of the visual field is relatively simple, but in clinical practice, many difficulties are met. There are numerous sources of possible error, such as faulty fixation, lack of attention of the patient, incomplete visual defects, low visual function in the periphery of the field, inaccurate technique, and refractive errors.

I wish to emphasize the importance of taking visual fields early and repeatedly. Sudden changes as to rapidity of involvement, and alteration in shape, indicate activity. More stationary changes indicate chronicity.

With this information obtained and with our knowledge of the physiology of vision and its relation to the anatomy of the visual pathways, accurate deductions can be reached which will give us material assistance in conjunction with our clinical findings.

HEADACHE; PROBLEMS IN DIAGNOSIS

O. L. Thorburn, M.D., Ames

Headache is one of the most common symptoms of which our patients complain. Hence, any discussion of this subject must be of interest even though it is an old problem and much has been written about it. I have nothing new to add. I propose only to review some of the more common causes of headache and to emphasize the need of breaking beyond the narrow confines of our own specialty, in order to arrive at proper diagnoses. The symptom of headache is common to all branches of medicine, not just our own. Patients often have very decided notions as to the origin of their trouble and, since sinuses and eyes are frequent causes of headache and have popular respect, these people often come to us for relief, sometimes to their misfortune. We must serve at times, therefore, as a clearing house, and guide our patients to the proper place for diagnosis and treatment.

Clinically, headaches may be mechanical, toxic or reflex in origin.[1] The way in which these factors operate to cause headache is largely speculative. From a neurologic standpoint, the majority of headaches are explained on a pressure basis, either permanent or periodic.[2] The pressure exerted may be due to increase in intracranial tissue, as in tumor of the brain, to arterial hypertension or venous congestion, or to excessive pressure of the cerebrospinal fluid. Since the dura has been demonstrated to be the only sensitive area in this

region, headache is considered as pain felt in the dural terminals of the trigeminus, dural branches of the upper cervicals, and the recurrent dural branch of the vagus.[3] It is rather difficult, however, to explain some of the so-called reflex headaches in this way.

Many classifications of headache have been evolved, depending largely upon the viewpoint of the author. For example, they are termed organic and functional;[4] intracranial, cranial and extracranial;[3] or of mechanical, reflex and independent forms. I do not believe these classifications help much in making a diagnosis, however. They may help some in arranging the various possibilities in mind, but usually the problem is to find out, by history and physical signs, what organ or organs are involved and in what way, so that a reasonable course of treatment may be used.

There are certain rather general facts regarding headache that might be mentioned here. There is very definitely an individual and familial tendency to headache. Some patients never seem to have headache, even with marked disturbances of function which would cause certain other patients almost unbearable cranial pain. This same trait is noticed in families. Other individuals and families have headache on the least provocation.[5] These patients may have forms of headache that are compatible with and often characterize an active life. They seem to be victims of "physiologic predestination." There is, then, a large hereditary factor in the susceptibility to headache. This tendency may vary from time to time in a given individual.[1] The organ or area which gives rise to headache may itself be entirely free from pain, and too, the dysfunction may be trifling and yet be very effective as a pain producer. Many patients have two or three kinds of headache which require differentiating. Moral, mental and physical influences may make a potential cause of headache suddenly effective, when it has been in existence and unnoticed for some time.

The importance of the personal history cannot be too strongly emphasized in helping us to trace the source of headache;[6] in fact, a careful history is often more important than the physical examination. It should include the following points:[4]

1. Location of pain, whether in and behind the eyes and through the temples, in the frontal region, in the vertex or in the occiput; or whether without definite location.

2. Period of time in which the headaches have been occurring, whether of recent or remote origin.

3. The character and severity of the pain, whether paroxysmal or steady; a dull ache or a sharp acute pain; whether throbbing, or affected by movement of the head or position.

4. Time of occurrence, whether it is present on waking in the morning or comes on during the day after some special task, or after using the eyes; or whether it comes on at night and keeps the patient awake.

5. Duration and frequency of the attacks; whether brief daily affairs, or of several days' duration and occurring more or less rarely.

6. Associated signs, symptoms and phenomena, such as nausea and vomiting, vertigo, photophobia, flashes of light; or occurrence of headache with menstruation or pregnancy, or with occupation, or any other special incident such as a cold, an injury or a fever.

7. Familial tendency to headache; whether the individual has previously had similar headache; whether relieved or unrelieved.

Such a history should suggest definite possibilities and the areas on which to focus attention in the examination. It should help immensely in determining whether any particular pathology found is the probable cause of the headache; and it should serve as a guide for any special tests, X-ray, laboratory, etc., which may be necessary in the study of the case. It would be impractical and unnecessary to subject every patient suffering with headache to complete and thorough physical and laboratory examinations; but we should know when certain tests are indispensable, or when a thorough examination is justifiable. So difficult is the problem in some cases that after every investigation and probable treatment has been tried, the patient still has his headache.

It is estimated[7] that from thirty to sixty per cent of functional headaches result from eyestrain. Because of the frequency of eyestrain, every patient with repeated headache should have a complete refraction, preferably under a cycloplegic. The mechanism causing eyestrain is fatigue of either the focusing or adjusting mechanisms; that is, from errors of refraction or from external muscle imbalance. Good vision is no proof of the lack of refractive error, and the severity of the headache is not dependent upon the magnitude of the error. It depends entirely upon the efforts made by the patient, often unconsciously, to correct it and upon his susceptibility, which is often hereditary. A refractive error may be present for a long period of time without causing any noticeable headache and then suddenly become effective, due to some other contributing factor such as illness, change of work, lowering of physical vitality, or age. Is there any way we can recognize, in a given case, whether or not a headache is ocular? Lancaster says not; that the character of the pain and

its location are no definite clue, that the most valuable guide is a good history, and that there is usually some connection with use of the eyes not always realized by the patient. Ocular headaches are usually frontal and bilateral. We must not conclude because a patient is wearing recently fitted glasses, that eyestrain is ruled out. Only a small percentage of those wearing glasses have been accurately fitted. Sometimes nothing short of the therapeutic test of wearing accurately fitted glasses will tell whether or not the headache is largely ocular. For deciding the normality of the external ocular muscles, the prolonged occlusion test is often necessary. The presence of a refractive error or muscle imbalance itself, however, is not a conclusive reason for headache, without substantiating points in the history. Of course we must never overlook organic disease of the eyes, such as iritis or glaucoma, when looking for the cause of headache.

Nasal or sinus headaches have, as a rule, a more definite history, but even here one can be led astray easily by attaching too much significance to pain in certain locations, usually thought indicative of the involvement of certain sinuses. In general, sinus headache occurs daily at about the same time and in the same location, is often unilateral, has a tendency to partial or complete remission during the day, and yields very definitely to treatment. The pain is caused by trauma or irritation to nerve elements, largely by pressure.[8] In the sinuses this pressure may be exerted by obliteration of the sinus lumen with retention of the secretions and pressure on the nerve terminals in the submucosa of the sinus; or the closure of the sinus lumen, with absorption of the contained oxygen and resulting negative pressure. In the nasal cavity proper, the pressure may be caused by deformities of the septum, middle turbinates or both, by polypi and new growths, or by hyperplastic processes narrowing the bony foramina and causing pressure. Allergic congestion as well as acute inflammation may cause pressure and headache. We are all familiar with the usual and typical sites of pain for certain sinuses, but nothing short of a thorough nose and sinus examination can decide for us whether the pain is due to sinus or nose pathology and whether the sinuses and nose can be ruled out as possible etiology. It is inexcusable to do surgery in this region when a headache really comes from some intracranial or systemic lesion, and on the other hand,[9] with no obvious sign of nasal disease, the headache may still have its origin here. Sluder's sphenopalatine neuralgia has a definite place in the list of unilateral head pains and can be proved easily by the relief induced from cocaine anaesthesia in this region. In acute fronto-ethmoid cases,[10] the patient often complains of eye symptoms, such as inability to use the eyes for any length of time, moderate conjunctival injection, slight droop of the upper lids and a little edema of the lower lids. Maxillary sinus infection often gives frontal pain. It takes a very careful history and sometimes a very thorough examination, including X-ray, to decide the part played by the nose and sinuses in a given case of headache.

I will now discuss briefly types of headache outside of our own field, the symptomatology of which might lead us to give treatment for ocular or nasal conditions without, of course, giving relief to the patient.

The migraine patient often comes to us for help. The typical migraine history includes such symptoms as unilateral headache, occurring once or twice a month over a long period, beginning in the morning, with sharp boring and expansile pain present on waking, in the eye, forehead and temples, or the side of the head, with disturbance of vision and scotomata, increasing in intensity until nausea and vomiting ensue, when relief usually takes place.[4] Some of these features may be lacking. The pain may not be strictly unilateral, there may not be scotomata or disturbance in vision; but there usually are nausea and vomiting, a history of periodicity and, if carefully inquired into, some family tendency to the same type of headache. Correction of focal defects and muscular anomalies of the eyes and the eradication of foci of infection will not cure these individuals, but relief of any such irritation does sometimes make their attacks less frequent and severe.

Syphilis is a very common cause of headache. Bowers[11] says that out of 121 neuro-syphilitics, 105 admitted headache at some time. The location was widely scattered; 45 per cent complained of fullness in the frontal region, dull and aching with pressure sensation, 15 per cent in either temple, 20 per cent in the occipital region, dull and aching and increased on movement of the head. About 35 per cent had sensations of dizziness, 75 per cent had tenderness on pressure over the scalp, especially in the frontal and occipital regions, 35 per cent had ringing in the ears and frequently nausea and vomiting. He concludes that persistent periodical and nocturnal headaches should be regarded as possibly luetic and call for searching physical and neuro-syphilitic examinations. Quite obviously these headaches might easily simulate those of ocular and nasal origin. I would not go so far as to say that every headache should be regarded as possibly luetic until proved other-

wise by exclusion, but we should not forget this possibility.

Organic brain disease[4] gives a headache which is likely to be of long duration and become progressively severe, fairly well localized, worse at night, sometimes waking the patient from sleep, and associated with vomiting. One is likely to find inequality of the pupils, abnormal eyegrounds, squint, disturbed reflexes, irregular pulse, drowsiness and convulsions. Percussion of the skull may reveal local tenderness or change in percussion note over a definite area. These symptoms and signs associated with the headache are not always present and a diagnosis of brain tumor or abscess is often very hard to make, but there is usually enough distinction to warn one from doing surgery on the nose or sinuses with expectation of benefit.

There seems to be a very definite type described by Winans[12] as "hurry headache." In this group I think we may include the so-called nervous and psychic headaches. They are found in individuals who have difficulty in keeping pace with the rush of our modern life. There is no special characteristic except that the cause can be elicited in the history. Winans divides this type of headache into three groups: (1) that developed during the day when there is extra work or anxiety to get something done by a certain time; (2) that developed during the following day, or present upon the patient's waking after a day of unusual strain; (3) a severe headache which lasts 24 to 48 hours, is very hard to relieve, is generally accompanied by falling blood pressure, and has been preceded by a sense of oppression for several days. In this group I believe may be placed the headaches attributed to fatigue,[6] in individuals who become temporarily unstable because of a defect in general hygiene; a lack of balance between work, sleep, exercise and recreation.

Among the endocrine causes of headache may be mentioned the climacteric, menstrual, and ovarian, and that due to functional dyspituitarism. Crossen[13] believes that the pelvic organs may cause headache in the following ways: (1) through blood loss with its resulting anemia, malnutrition, lowered resistance and increased irritability of the nerves; (2) through septic absorption of an inflammatory focus with like results; (3) through peritoneal irritation with consequent malnutrition from vomiting and other digestive disturbances; (4) through pain so persistent or recurring as to put the whole nervous system in an irritable, hypersensitive condition, and (5) through worry about some serious pelvic lesion, or even a minor lesion, keeping the whole nervous system on edge, with consequent headache and other pain phenomena.

These headaches of course have no special characteristics, but are associated with pelvic trouble and only inquiry along this line would lead the examining physician to suspect them. Menstrual headaches, of course, have a certain time and duration to distinguish them. They are attributed to ovarian toxemia.[14] Fishbaugh[15] states that there is a type of headache associated with ovarian dysfunction, that it is not characteristic but is associated with nervous symptoms and other features of ovarian insufficiency, that relief is obtained by cure of the ovarian dysfunction, and that a correct diagnosis is essential if results are to be obtained by ovarian feeding. Stevens[16] describes a headache of the menopause in which the patient is overweight, has a slow pulse, subnormal temperature, dry, coarse skin, cold hands and feet, diminished tactile sensation and sluggish knee jerks. The headache is usually frontal or in the vertex, dull, occurring three or four times a week, is sometimes constant day and night, is aggravated by fatigue and nervous tension, and is associated with vertigo. The patient has a phlegmatic appearance but is usually nervous and tired. The metabolic rate is -2 to -20. There is a mild myxedematous state and the patients are benefited by thyroid extract. Drury[19] states that a characteristic of pituitary dysfunction headaches is that they usually stop at once on lying down and began again upon getting up, that they are usually disabling and persistent, but paroxysmal, of a boring, bitemporal, intense nature and associated with drowsiness.

Gastro-intestinal headaches have a history of gastric difficulty, are usually located in the forehead and temples and are of a throbbing nature. They are associated with liver dysfunction. They are increased by moving about and relieved to some extent by rest in a recumbent position and by purging. Nephritis and uremia[4] are suggested by a frontal or occipital headache occurring particularly in the morning and in various degrees of severity, accompanied by drowsiness, dyspnea, disturbance in vision and changes in the eyegrounds, with high blood pressure and edema.

Another definite cause of headache which should be mentioned is arthritis of the cervical spine. I can do no better in describing this cause than to quote Holbrook:[17] "The principal symptom of arthritis of the cervical spine is pain. When the first two or three vertebrae are involved, the pain is mainly referred to the head. This pain is usually occipital but may extend foward to the bregma. With this occipital headache, a temporal or frontal headache may be associated. The pa-

tient usually complains only of headache in the back of the head, but if the investigation is pushed further, it will often be found that the pain extends into the neck. In instances where the entire cervical spine is involved to a greater or less degree, the pain is between the shoulders and down the arms; however it is for headache that the patient usually seeks relief. The pain may be continuous for weeks or months, though as a rule periods of suffering alternate with freedom from pain. In intensity the pain may vary from a feeling of discomfort and tightness to excruciating pain. In most cases there will be a history of grating, grinding, cracking, or popping noises in the neck caused by bending or rotating the neck. The symptoms of stiff or wry neck are often found in patients who suffer from arthritic changes in the upper spine. An important symptom of cervical arthritis is limitation of movement of the head and neck. Lateral bending is limited and often painful." One can easily see that this condition might be considered sphenoid sinus trouble if the location of the pain alone were taken into account.

In summary, I would say that as specialists we must be very careful not to assume that every headache has a cause which can be found in our field. All possible factors in the patient's condition must be considered in this important problem. After a careful history, which should include inquiry about general causes of headache, we may make our special examination and then be able to evaluate the probable influence of any abnormality found. We must not place too much dependence on distinctive features and favorite sites for the location of headaches. If we are satisfied with the information which they alone afford, errors in diagnosis are sure to arise. As deSchweinitz says:[18] "Headaches are accomplished counterfeiters, and it does not do to trust too implicitly to labels."

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Dr. Harold J. McCoy, Des Moines. It is true that this paper, as stated, is of interest to all in medical practice, for headache is one of the most common symptoms met with, and the various conditions with which it is associated are most numerous, as you all know.

Headache may be the first symptom calling attention to the existence of grave organic disease and the correct diagnosis of the cause of this symptom is obviously of the greatest importance.

Too often, unfortunately, treatment of a headache precedes a careful investigation as to its cause and an increased risk may thereby be incurred by the patient through the delay in recognizing some one of its more serious causes.

The explanation of the mode of production of the pain known as headache is not easy, since the brain substance itself is insensible to mechanical stimulation. The meninges are supplied with sensory nerves, and abnormal stimuli received therefrom reach the cortex and give rise to the impression of pain. Abnormal states of the intracranial blood vessels are more difficult of explanation as it is uncertain that they have any sensory nerve supply.

It seems probable that the headache produced by increased vascular tension is pressure effect acting on the brain as a whole or on its covering, the meninges.

As the essayist has stated, we recognize mechanical, toxic, and reflex types of headaches, or we might say, there are headaches due to organic disease in the head or other parts and functional disturbances about the head or parts elsewhere in the body.

There are some diseases or conditions in which one person will have headaches and another will not. Here individual characteristics enter in and can only be explained on an hereditary basis.

Eyestrain as a cause of headache is not explained by the degree of error of refraction but by individual characteristics and general physical condition of the patient. In some cases the correction of slight errors gives much relief, while other patients with much greater error of refraction do not have relief from glasses, and many times do not have headaches.

Headache, then is a variable as well as a common symptom. It may be decidedly diagnostic. A man aged fifty-seven came to me complaining of headache and wanted his sinuses examined. The sinuses were clear and nose clean. The eyes had recently been checked elsewhere. The duration of the complaint was one year, the headache being worse at night and increasing of late. Other symptoms included some gnawing sensation in left chest at times. He thought he had a cancer in his chest and said nothing about it. No history of a chancre

at the age of sixteen years when he first left home he did have a chancre but was sure he was entirely cured. His wife and two sons, who were of age, were well and had always been in good health. Wassermann was taken and was four plus. He was referred for general treatment. His predominant symptom was headache, which was worse at night. This kind of headache would be classified as a toxic type.

A very common condition causing headache is constipation, or inactive or toxic lower bowel and was admitted at first but later he remembered that such headaches are relieved by proper diet and regulation of bowel movements. This type of headache may be reflex, congestive, or toxic.

The congestive nasal condition causing headache is many times due to bowel disturbances and will clear up when these are corrected.

Headache is a form of pain due to increased pressure on the sensory nerve endings of the head, and should be studied in order to determine whether eyes, nose, sinuses, intracranial tumors or inflammation, or some general disease may be the cause of the trouble.

I think Dr. Thorburn's paper is very much worth while and this subject should be studied more by each of us.

Dr. Harry M. Ivins, Cedar Rapids. Dr. Thorburn has thoroughly reviewed the subject, in my judgment; indeed, he has presented certain phases that I am not in a position to discuss. Many of these types, as has been suggested, are seen by the general practitioner.

Contrary to Dr. Thorburn's opinion, it would seem to me that classification of headaches is necessary. I would find it easier to diagnose a case if I could place the kind of headache found, by history taking, as mechanical, toxic or reflex.

A carefully taken history will, I believe, in a majority of cases, differentiate the type of headache and that surely will give you a hunch as to what you should advise, in case you don't find the ocular defect sufficient.

Under "history taking," Dr. Thorburn suggests seven points which I think should have been discussed by him. His paper was not on history taking and I suppose that was the reason he didn't; however, it would be interesting to have a differential analysis of head pains, the reason for the different locations, the reason for the different time periods, etc.

Dr. Thorburn states, "every case of repeated headaches should have complete refraction, preferably under cyclopegic." I believe every case should have the ocular examination, but doubt the necessity for the cycloplegic. There are many cases in which we want, or have to have a paralysis of the intrinsic muscle, but there are on the other hand just as many in which better definite results are obtained when we do not interfere with the intrinsic muscles.

We see cases in which the eyes have been so terrifically abused that their muscle spasm is difficult to overcome with atropine. In such cases it is practically impossible to measure the length of the eyeball accurately in all axes.

The essayist says, "Only a small per cent of glass wearers are accurately fitted." I am not sure he is not correct in that statement; however, I think we should be charitable, because I believe that most of us are careful and painstaking.

An accurate measurement of the length of the eyeball in all axes may not result in a comfortable pair of glasses; in fact the patient may not be able to wear them. Such cases are sometimes relieved only by the treatment of therapeutic findings.

I believe it makes a lot of difference when you get the patient, what he has been doing, and what his physical condition is, whether he is wearing a pair of accurately fitted glasses.

Dr. Charles B. Taylor, Ottumwa. I promise you, Mr. Chairman, that I am not going to take very long to discuss this paper, which was very interesting. Dr. Thorburn has presented this subject in a very interesting way. He takes up a line that I am much interested in myself. Having been a general practitioner, I learned that many pains in the head are not of sinus origin. Many of them have their origin in the belly and kidneys and pelvis. One of the first questions that suggested itself to me was: How are these troubles transmitted to the head as pain?

I studied this quite carefully. I learned that we have the communication to the head through the distribution of the sympathetic nervous system, and that most of the head pains are shown over the distribution of the branches of the fifth cranial nerve.

We know that the second and third cervical sympathetics have a direct communication from the spinal sympathetics through the posterior auricular to the otic ganglion and from there by means of the sensory branch of the facial and vidian to the sphenopalatine ganglion; that the complete circuit is made from the abdominal and pelvic and kidney territories to the distribution of the fifth and its hookup.

We have pains in the head through our sinuses; we have pains in the head through our eyes, to be sure, via the distribution of the ophthalmic division of the fifth, and since the ophthalmic, the nasal, and the ganglion are all a part of the fifth, the head pains from this region are largely through the ramification of the fifth nerve.

Dr. Oral L. Thorburn, (closing). I am very grateful for the discussion. I realize that the points taken in the history should have been better analyzed, and that that is one of the important things we have to do. Even while we are taking the history, we must analyze in our own minds the importance of certain symptoms, certain times of occurrence, and so forth, and what relation they have to the diagnosis. Time did not permit my going into that very thoroughly. As to whether a cycloplegic should be used in all cases; I suppose that is too inclusive, but I think it should be used in a majority of cases at least. In older individuals I do not think it is always necessary. A very large percentage of people are not wearing properly fitted glasses, not because of any lack of care on our part, but because they are not fitted by us.

DIGITALIS DELIRIUM WITH COLORED VISION: REPORT OF ONE CASE*

Harry L. Smith, M.D.
section on cardiology
The Mayo Clinic, Rochester

There are numerous signs and symptoms of intoxication due to digitalis, some of which were referred to and described as early as were the therapeutic effects of the drug.

Purkinje[2] described some of the visual disturbances produced by digitalis one hundred years ago, and Withering many years ago described its toxic manifestations. He said: "Let it be given until it either acts on the kidneys, the stomach, the pulse or the bowels and let it be stopped on the first appearance of any one of these effects."

The criteria for discontinuing the use of digitalis are not universally known or practiced at the present time. There is a syndrome of digitalis intoxication, such as headaches, anorexia, nausea, vomiting, giddiness, slurring of vision and bradycardia, which is fully appreciated, and which represents the milder symptoms of digitalis poisoning.

For convenience and completeness it is more satisfactory to group or to classify the clinical and experimental signs and symptoms of digitalis poisoning by systems. Such manifestations are variable; they are not present in all cases and they depend largely on the severity of the intoxication. Symptoms referable to the eyes are blurring of vision, scotoma, diplopia, and colored vision (green, yellow or white more common).[3, 5]

The toxic effects of digitalis on the heart are mainly disturbance of rhythm. About the only subjective symptom referable to the heart is that of precordial discomfort, and this is rather rare. Digitalis intoxication may produce sinus arrhythmia, bradycardia, premature contractions, coupled beats, ventricular escape, or pulsus alternans. Digitalis may produce any degree of heart block; prolongation of the P-R interval to complete auriculoventricular dissociation. Auricular and ventricular paroxysmal tachycardia and auricular fibrillation have been observed in a few instances and ventricular fibrillation has been noted in end stages of digitalis poisoning.[4]

The gastro-intestinal disturbances are made apparent by anorexia, nausea, vomiting, abdominal cramps, diarrhea, and in extreme cases by bloody stools.

The neurologic symptoms are headaches, depression (usually mild), impairment of memory, confusion, delirium and convulsions.

The urinary symptoms are albuminuria, hematuria and partial to complete suppression of urine.

The toxic effects on the respiratory system are manifested by mild and shallow to strong and deep respirations. In severe cases marked dyspnea is present and in the late stages complete failure of respiration may be observed, due to paralysis of the respiratory center.

Mild digitalis intoxication has little, if any, effect on blood pressure, but in severe poisoning there is often a marked drop in blood pressure, which is associated with extreme weakness and prostration.[1]

The case presented here is one of the more rare and severe types, that of digitalis delirium with colored vision.

A man, aged seventy-two years, apparently had been well until about two years before his admission to the clinic. At that time dyspnea on exertion had developed which progressed until about six months prior to his coming to the clinic when he suffered severe substernal pain. The pain always came on with exertion and was relieved by rest. He also had severe paroxysmal attacks of nocturnal dyspnea. Two weeks previously he was given tincture of digitalis, fifty drops three times a day for three days; then fifteen drops three times a day for seven days. The dosage was then increased to twenty-five drops three times a day for two days, and later to thirty-five drops three times a day for two days, making a total of about forty c.c. in a period of two weeks. About three days after the patient began taking digitalis he became restless, irritable, and somewhat confused. Two or three days later his vision became somewhat blurred; objects and faces were distinguished with difficulty. A day or two later, colored vision was marked, and practically everything that the patient saw was white. One afternoon he was looking out of the window watching passing automobiles and remarked that all of the cars were white; his daughter came to visit him wearing a dark blue coat and he asked her when she got her white coat; some red tulips appeared white to him. This colored vision persisted for several days.

When the patient was admitted to the hospital, he was somewhat confused and slightly irrational. He appeared to be poorly nourished. His skin was dry and wrinkled. His heart was moderately enlarged and the tones of poor quality. There were no significant murmurs; the rate was eighty-four; there were numerous ventricular premature contractions; the aortic second sound was louder than the pulmonic second. There was moisture at the bases of both lungs. The electrocardiogram showed a rate of seventy-eight, ventricular premature contractions, a slurring of the QRS complexes in derivations I and II, notched in derivation III, and diphasic T-wave in derivations I, II, and III.

*Preliminary report was published in Proceedings of the Staff Meetings of The Mayo Clinic, 4:317-318 (Oct. 30) 1929.

A diagnosis of angina pectoris with arteriosclerosis of the coronary arteries and of the central nervous system was made.

About two hours after the patient's admission to the hospital, his confusion and restlessness became more marked. He refused to answer questions, began to talk irrationally, and to roll and toss in bed. About an hour later he became extremely noisy and went into acute delirium. Restraining straps were applied, and one-fourth grain of morphine was given; about half an hour later one-eighth grain of hyoscine, morphine, and cactina was given. During most of the night the patient was noisy but the next morning he was a little more quiet, and answered when spoken to. He knew his name, and recognized his daughter, but he was still badly confused. He complained of being extremely dizzy. His condition remained about the same for three days, and then began to improve gradually. He was given plenty of fluids by mouth, by rectum, and intravenously, but no drugs other than opiates. The patient was dismissed from the hospital on the twelfth day after admission.

It is now about a year since the patient left the hospital. The condition of his heart has remained about the same. His mind is entirely clear. His memory is somewhat impaired but is as good as it was prior to the acute illness. Visual disturbances have not returned.

This case is of interest from the standpoint of delirium and visual disturbances. Patients with digitalis delirium who have been observed in The Mayo Clinic and who have recovered have usually done so in about five or six days. Digitalis delirium is not common, and it is usually serious. It should be suspected if patients taking digitalis develop toxic manifestations.

The following are the important factors in making a diagnosis of digitalis delirium. The patients are usually more than fifty years of age and as a rule have advanced arteriosclerosis. Digitalis has usually been given in large doses for a long period of time, and there is no other cause for the delirium. The presence of other manifestations of digitalis intoxication should be noted.[4] The delirium should be cleared by discontinuing digitalis and giving plenty of fluids and nourishing foods. Rest should be induced by bromides and morphine.

Digitalis is still the sovereign therapeutic cardiac agent; there is no substitute for it. It is probably more abused and causes a greater variance of opinion as to type of preparation, indications and contra-indications, dosage, length of time and mode of administration, than any other known drug.

As a general rule, digitalis should be discontinued when the first mild toxic symptoms are recognized. It absolutely should not be continued until severe toxic symptoms develop, as this case well demonstrates.

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SUPPURATIVE CHOROIDITIS OF ENDOGENOUS ORIGIN

CHARLES F. HOWLAND, M.D., Des Moines

My only reason for calling the attention of this section to a subject so long before the profession, is an experience of the last few months which was not only alarming but which had disastrous results as well.

In this paper I will not in any way attempt to discuss the many different forms of choroiditis but limit my remarks to metastatic choroiditis arising from endogenous infection. We all, of course, see many cases of the milder forms of choroiditis but few, I hope, see many of the more malignant cases. In looking up the literature I find that there has been a great deal written on this subject by foreign writers, as well as by the members of our local profession.

Axenfield, who has made an extensive experimental and clinical study of metastatic ophthalmia, came to the conclusion that a septic mass composed of broken-down infected particles of tissue, finds its way into the blood stream, forming a septic embolus, and that such embolus shows a predilection for the capillaries of the choroidal coat of the eye, where it becomes arrested and causes a new suppurative process. This soon spreads to the vitreous and other structures of the eye.

Weeks speaks of this condition as embolic choroiditis and subdivides it into the suppurative and embolic types.

Parsons uses the term "metastatic suppurative choroiditis" only for such cases as occur in puerperal fever and other cases of surgical pyemia where septic emboli are carried to the choroid.

Fuchs mentions cases complicating variola, anthrax, influenza, ulcerative endocarditis, diphtheria and pneumonia.

ETIOLOGY

The infectious organism is usually staphylococcus, streptococcus, or the pneumococcus.

Probably one-half of the endogenous cases complicate puerperal pyemia. These usually develop in the first two weeks of the disease but cases have been reported as late as the seventh week. Then we may encounter the case that comes on spontaneously, the so-called cryptogenic case, the origin of which is undoubtedly pyogenic in some region of the body. Fortunately, the septic embolus usually lodges in only one eye, although many cases of bilateral metastatic ophthalmia have been reported. In sixty-three cases reported by Axenfield, twenty-two were bilateral. The process is such a rapid one that the early stages when the inflammation is limited to the retinal coats, is seldom seen. Usually by the time the patient reaches a physician there is marked swelling of the lids, edema of the conjunctiva, some bulging and retarded motion. The symptoms from this point are the same as those of a panophthalmitis due to exogenous causes such as injuries, perforating ulcers, etc. As the swelling increases, the lids become so tense that they seem to press upon the enlarged exophthalmic eye and crowd a mass of chemotic conjunctiva between the lids, usually covering the entire cornea and hiding it from view. The symptoms may be ushered in by a chill but usually the temperature is not high. Panophthalmitis of endogenous origin may at first glance be mistaken for an orbital cellulitis, as the external symptoms are alike in both conditions. The differential diagnosis is made by ophthalmic examination, which reveals a clear media in the latter, while in the former one will find a yellowish cloudy media. Symptoms of thrombophlebitis of the cavernous sinus also simulate panophthalmitis, but examination shows a clear media with a possible choked disk.

In 1925 Adolph O. Pfungst of Louisville reported two cases of unilateral involvement, which were briefly as follows:

Case 1:

Male, age 62, previous history negative. February 21st, began sneezing repeatedly and for several days was bothered with a watery discharge from the right side of the nose. This gradually became purulent in nature and the condition was soon complicated by a suppuration of both ears. The left nostril seemed normal. Ten days after the initial symptoms, the left eye became red, swollen and painful and the lids were beginning to swell. When Pfungst examined the eye two days later he found marked chemosis, the lids swollen and discolored, with a slightly protruding eyeball. Rotation was limited in every direction. The pupil was moderately dilated; the interior of the eye seemed dark and he was unable to obtain even a light reflex. Gradually pus became visible in the anterior chamber and the eyeball became very much enlarged and exophthalmic. Strangely, there was very little pain and *no* elevation of temperature. One hundred degrees was the maximum and there was no chill during the entire course of this abscess. X-ray of the head showed a dark right antrum. On the thirteenth day following the initial eye symptom a point of rupture was discovered in the sclera on the temporal side about one-fourth inch external to the limbus. Drainage persisted for some considerable time with an ultimate atrophic eyeball.

Case 2:

Female, age 38, foreigner. Previous history impossible to obtain. It seemed that her right eye had suddenly become inflamed and extremely painful a week before she was seen by the doctor. The only history of significance was that this lady had missed two periods and examination by a surgeon revealed an incomplete abortion. Examination of the eye showed proptosis and chemosis. Pfungst was unable to see anything but a yellowish reflex through a moderately enlarged pupil. The movements of the eye were limited. At this time treatment was refused. Five days later, however, the patient returned because of pain. An examination revealed an eyeball filled with pus and at the limbus on the temporal side there was a fistulous opening from which pus drained. This resulted finally in an atrophic eyeball.

Vaughn reports a case of a lady who had submitted to criminal abortion. This was followed by a pyemia, septic arthritis and a metastatic ophthalmia in both eyes which terminated in blindness.

In addition to the 100 per cent loss of eyes in metastatic ophthalmia, the prognosis as to life in these cases is bad. This is especially true of the bilateral cases in which, according to Axenfield, there is a mortality of about 85 per cent. In the unilateral cases a *better* prognosis can be offered. The mortality in these cases is about 20 per cent. Suppurative endocarditis is a frequent complication. Death usually results from a general pyemia.

It might be of interest to note that the cases of unilateral involvement rarely if ever cause sympathetic ophthalmia of the other eye. In the treatment of these cases most oculists adhere to the conservative measures, that is atropine, hot applications, rest in bed, attention to the intestinal functions, and the use of sedatives for the pain. Subconjunctival injection of normal saline solution or of mercury oxycyanid may prove beneficial. Constitutionally, mercurial inunctions with iodides internally or large doses of salicylates

afford the best results. Incision through the sclera is permissible if the pain becomes unbearable, otherwise no operation is employed for fear that incising the infiltrated cellular tissue might aid in spreading the infection to the meninges. For the same reason, enucleation of the eyeball during the acute stage is by some oculists considered less conservative than a later operation. There are those, however, who believe that this danger of early operation has been over-estimated and they advocate the enucleation at any stage of the panophthalmitis. The opinions on this point seemed varied and they prompted an endless amount of discussion. Some feel that an evisceration of the globe followed by later operation is the safer procedure.

The case that I wish to report is one of a lady, Mrs. B. O., 48 years of age, married and mother of two children. She was admitted to the Iowa Lutheran Hospital on July 18, 1929. Her family history was negative. Her personal history was of no interest as she had had only the diseases of childhood. For several years she had had what was thought to be recurring attacks of cystitis which had always cleared up with sedative treatment. About three days before being referred to the hospital she was seized with a severe chill, which was followed by high temperature and she was confined to her bed with what was thought to be an acute attack of her old trouble. The evening before being sent to the hospital she remarked to her physician that she had noticed since morning that her vision was failing. She had never before complained of her eyes and had had no pain or evidence of inflammation of either eye. The morning of her entrance into the hospital she was examined by a consultant who called me, stating that he was afraid that we were dealing with pus in both anterior chambers. He reported that her heart and lungs were negative. Examination of this lady's nose, throat, teeth, and sinuses, revealed no evidence of pathology. The lids of both eyes were slightly swollen and the orbital conjunctiva was markedly edematous. The corneas were both clear with no evidence of ulceration. The pupils were both slightly dilated. There was a distinct hypopyon present in both anterior chambers. The media was so cloudy that we were unable to get more than a faint reflex. Atropine was instilled into both eyes and heat applied. On the following morning the symptoms were very much exaggerated. The lids were more swollen, the edema more pronounced and both anterior chambers were entirely filled with pus. The eyeballs were slightly protruding and excursion of the globes was limited. Upon examination of the right eye the second evening I found a groove-like ulcer which seemed deep, extending around the limbus possibly one-half its circumference on the nasal side. The ulcer was ragged and looked as if one had gouged the cornea with a wedge-shaped instrument removing the superficial layers. Otherwise the eyes seemed about the same as on the previous examination. There was no evidence of any ulceration of the cornea of the left eye. The eyes were washed with a solution of boric, argyrol and atropine and heat was continued. Sedatives were ordered for the pain, which was not unusually severe. At this time milk injection was suggested. On the morning of the third day I found that the right cornea had perforated at the limbus and the lens was found to have been forced through the opening into the palpebral fissure. We were able to wipe the lens away with a cotton applicator. Of course the contents of the eye were draining through this rupture. Examination of the left eye at this time showed an ulcer on the nasal side of the cornea at the limbus, about the same character as had been found the previous evening on the right eye. It had not ruptured but had the appearance of a ragged, wedge-shaped excavation extending about one-third the circumference of the limbus. That same evening upon dressing the eye I found the cornea had ruptured and the lens had come away with the gauze pack. There was associated pussy discharge from this eye. Blood cultures taken at the time of her entrance and later were negative after eighty-two hours' growth. The spinal fluid was clear and negative to culture. Cystoscopic examination by Dr. King showed the bladder and urethral openings normal. Cultures were taken from the bladder and both kidneys. Cultures of the catheterized specimens showed the Bacillus pyocyaneus in almost pure culture. Cultures taken from either eye at the time of rupture were reported by Dr. Weingart as follows:

"Cultures from eyes showed a pure growth of an actively motile, small, gram-negative bacillus which gives a diffusible, greenish pigment on broth and on agar. The organism is without doubt the Bacillus pyocyaneus."

My conclusions were that we had been dealing with a metastatic choroiditis caused by the Bacillus pyocyaneus which was endogenous in origin and which resulted in the loss of both eyes. The eyes had been sealed but were soft at the time of the patient's death on August 16th, just a month after her initial chill.

I am in hopes that someone will suggest a line of treatment that might have been instituted early and which would have given us a more favorable outcome.

Discussion

Dr. Julius S. Weingart, Des Moines. The case reported by the essayist is very unusual. I saw the patient on July 18, 1929, in consultation with Dr. A. E. Shaw of Des Moines. My notes, made at that time, were as follows:

"The history is that four days ago she had a severe chill. The next day she felt better, but still had some fever. This fever progressed in severity, with headache and cloudiness of vision. At present she is very ill. Is conscious. No neck rigidity. Exudate in both conjunctival sacs. Cloudiness in the anterior chambers of both eyes. Blotchy hemorrhagic areas on both lower extremeties. A mass is palpable in the left flank. I am not sure whether this is spleen or kidney, but think it is probably the latter. No other changes found. There is a history of recurrent attacks of urinary difficulty over the last few years. The urine at present is of low specific gravity, and contains much pus. Lumbar puncture shows a normal fluid. Diagnosis: Probably a septicemia originating in a pyonephrosis of long standing. The eye condition likely a metastatic panophthalmitis. Prognosis: Very grave."

The fever continued high. For one week it was almost normal, but rose again and reached 106 before death. Cultures from both the eyes and from a catheterized specimen of urine showed a pure growth of B. pyocyaneus. X-ray showed that the mass in the left flank was probably a spleen, with many calcified nodules in it. Blood culture was negative.

Unfortunately no autopsy was obtainable. There is no reasonable doubt, however, that the eye lesions were metastatic in origin or that the focus lay in the renal system.

Dr. J. B. Naftzger, Sioux City. Dr. Howland's interesting but unfortunate case adds another to the list of tragedies which may follow septic infections. Metastatic suppurative choroiditis of endogenous origin may follow any of the acute infections.

I would like to report a case of endophthalmitis in a child seventeen months old following epidemic meningitis. This baby developed meningitis in November, 1929. During the attack the mother noticed that the lids were slightly swollen and the eyes were red and the child soon refused to open the eyes at all. As far as she knew there was no severe pain. The eyes were examined by the family physicians on various occasions. There was no secretion and the swelling of the lids did not develop to any great extent, but the redness persisted.

She was brought to our office on December 24, 1929. At that time she showed signs of endophthalmitis which had been confined to the posterior segment of the eye. The process had terminated by an encapsulation of the abscess and the mass in the vitreous gave the appearance of a glioma. This has been described by others and called a pseudoglioma. The pupils were dilated and the baby examined under an anesthetic.

The baby returned to the office two days ago, apparently completely blind in both eyes, with the same condition persisting, some injection of the eyes, but no other symptoms. The termination of this probably will be detachment of the retina from contraction of the mass and adhesive bands with a gradual shrinking and softening of the eyeball, although some few cases have been reported where slight vision was retained following similar conditions. In these cases where the infection is confined to the posterior segment of the eye it is probable that the organisms are not so virulent. There is as a rule practically no pain as the retina and choroid are not sensitive and the entire course of the disease may be very quiet. The majority of these cases are reported as following meningitis and are in children. I have seen other unilateral cases which went on to panophthalmus in adults, one following pneumonia and the other supposedly following an ulcerated sore throat.

The treatment of any of these cases has so far been very unsatisfactory and personally I can see nothing better in the future, inasmuch as we have an infected embolus lodging in the blood vessels of the choroid with nothing to stop the infection spreading to the retina and the vitreous.

Dr. C. S. O'Brien, Iowa City. I was very much interested in Dr. Howland's report because there have been very few cases of Bacillus pyocyaneus ulcer of the cornea reported in the American literature. I think in Europe there have been several cases reported. I remember Professor Lindner saying to me that in his experience there were two or three organisms which caused even more rapid destruction of the cornea than that which comes from pneumococcus infection. These organisms are Bacillus pyocyaneus, Bacillus liquefaciens, and Bacillus ulcus serpens fulminans. It seems that the cornea is destroyed within a very few hours following infection by these organisms, as has been shown in Dr. Howland's case.

Regarding the occurrence of purulent inflammation in the choroid, retina, and vitreous—we have a few of these cases in Iowa City. About four months ago there were two children with endogenous vitreous abscesses, both of whom were ill with cerebrospinal meningitis. However, neither of these cases was at all like the case which Dr. Howland has reported. This type of infection limits itself usually to the posterior portion of the eye, and, while there is destruction of vision, there is no frank panophthalmitis and the eyeball does not rupture and is not destroyed. These cases later show a complete atrophy of the globe.

AGRANULOCYTIC ANGINA

Frank H. Reuling, M.D., Waterloo

Agranulocytic angina is a symptom complex or disease which is becoming increasingly common or is more frequently recognized, judging from the number of cases reported. It was first described by Turk in 1907 and again by Schultz in 1922. In 1927 Kastlin carefully reviewed the literature, and found forty-three cases. Since

then the total number of cases reported will exceed a total of two hundred.

The great majority of cases have occurred in women, usually of middle age. In Kastlin's series thirty-five were females and ten were males. There is no agreement as to the exciting or predisposing etiology. Some authors have felt that their patients were below par prior to their illness while others deny any previous impairment of general health. The greatest difference of opinion exists as to whether the virulent throat infection is primary and accounts for the toxic paralysis of the blood-forming organs or whether there is a primary mal-function of the bone marrow producing a marked lowering of resistance, thus permitting the normal flora of the throat to become suddenly pathogenic. In support of the latter theory, severe cases of vaginal and urethral infections accompanying the throat infection have been reported. Also many ulcerative lesions of the intestinal tract have been found at autopsy.

There has been some rather convincing evidence to show that the bacillus pyocyaneus is the etiologic organism. Linticum has recovered this organism in pure culture from lesions in the mouth and lesions in the internal organs and has subsequently been able to produce a very similar disease in guinea pigs accompanied by a leukopenia and a decrease in the formation of granular elements of the blood.

The beginning of the disease is very similar to the onset of an ordinary tonsillitis; sore throat, chill, headache, temperature and general malaise. The tonsils are involved early by single or multiple dirty gray exudates which rapidly spread to the gums and cheeks, and occasionally down to the larynx. The disease usually proceeds to a fatal termination in from five to ten days.

The characteristic diagnostic feature of this disease is in the blood picture. The red blood cells, hemoglobin, and blood platelets are essentially normal. The total white count is reduced and there is a sharp reduction in the polymorphonuclear leukocytes or they are totally absent, hence the term agranulocytic. There is a relative increase in the lymphocytes. Blood cultures have usually been negative although the bacillus pyocyaneus has been reported.

Agranulocytic angina may be differentiated from an infectious mononucleosis by the usual absence of glands and the low white count. Both diseases have a lymphocytosis, in the former it is relative, in the latter it is absolute. This disease must also be differentiated from septicemia with a low white count; by the practical absence of the polymorphonuclear leukocytes.

Treatment has consisted of the use of arsenicals locally and intravenously, streptoccus serums, blood transfusions and radiation of the long bones with stimulating X-rays.

The case I wish to report was a married woman, age thirty-two, who had an entirely negative family and past personal history. She was admitted to the Allen Memorial Hospital on March 9, 1929, with tonsillitis which she had had for two days and for which she had been using the usual home remedies. She had a temperature of 101.2, pulse 120, respiration 18. She appeared sharply prostrated, but was perfectly rational. On first glancing into her mouth you might gain the impression that you were dealing with a fulminating Vincent's angina, but on more careful examination there was an absence of ulceration. A dirty gray exudate partly covered both tonsils, extended up over the soft palate and was invading the gums around the lower teeth, and the cheeks. The membrane could not be peeled off.

Direct smear of the throat showed numerous staphylococci and micrococcus catarrhalis and many diplococci. The culture showed many chains of streptococci and diplococci. The blood count was: red blood cells 4,250,000; white blood cells 5,700; lymphocytes 90 per cent, polymorphonuclear leukocytes 9 per cent, transitional 1 per cent. The urine was negative except for one plus albumen.

The next day she was more toxic. The temperature went to 104.6, pulse 116, respiration 26. The following morning she was irrational. The areas in her mouth and throat had spread. Her white blood count was 2,287; lymphocytes 94 per cent, polymorphonuclear leukocytes 6 per cent. She was given a transfusion of 500 c.c. whole blood. Her blood culture and blood Wasserman were reported negative. On the following day her general condition was appreciably worse but her throat condition remained about the same. The total white count was reduced to 950.

On March 16, 1929, she appeared to be dying. Her white count was 650 and it was impossible to find any polymorphonuclear leukocytes. She was again transfused and later given streptococcus serum. For the three following days her condition improved slightly. Her blood picture mounted to as high as 3,950 white cells and the lympocytes fell as low as 86 per cent during which time metamyelocytes or embryonic white cells appeared in the blood. On March 20, 1929 she died.

During her illness she had a number of hypodermics for the relief of pain. Around each one of the injections a severe infiltration occurred within twelve hours, followed by a gradual breaking down and sloughing out of tissue. This of course, was due to her very low resistance and the inability

of her tissues to resist any trauma. The areas of puncture could not have looked worse if she had had a severe caustic injected instead of the small amount of morphine or codeine. This patient was in the hospital eleven days before she died, which is a rather long course for this disease. Her throat condition during the first few days advanced rapidly. From then on, during her remission, and until death the throat and mouth lesions remained practically stationary and did not seem to be influencing her prostration, her remission, nor her fatal termination. In her case it seemed evident, from the clinical standpoint, that her blood dyscrasia was the etiologic factor instead of the throat lesion.

Dr. Edwin W. Cobb, Marshalltown. Dr. Reuling has covered the subject of agranulocytic angina in a very thorough manner. Unfortunately for myself but fortunately for the patient, I do not recall ever having had a case of agranulocytosis, accompanied by gangrenous stomatitis.

In review of Kastlin's forty-three cases, and also those of Schultz, Savitt, Spielberg, Hart, Heuper, O'Connor, and Blummer, I find that they seem agreed that the disease is primarily an infectious one; however, they are not agreed as to whether it is primarily a throat infection with secondary infection of the blood stream, or whether it is primarily a blood stream infection with later involvement of the throat. The typical case is that of a sudden onset of a sore throat, severe prostration, high temperature, which rapidly terminates in coma, and death. Agranulocytosis may be accompanied with or without gland involvement of the throat, and shows a definite leukopenia of below one thousand, and with marked decrease in the number of granulocytes.

Up to 1927, about three-fourths of the cases reported were found to be in Germany and Austria, but since attention has been called to this condition, numerous cases have been reported in this country, the greater number of which have been fatal.

There seem present in the system an infectious toxin which has a certain affinity for the neutrophilic producing structure of the bone marrow. The two outstanding clinical features are: 1. Ulcerated and necrotic areas in the mouth and pharynx. 2. Low white count, especially in the number of polymorphonuclear leukocytes, which may nearly disappear before death. Kastlin, of Toronto, found that there are several conditions which could produce this picture, namely, arsenic poisoning, radium over-dosage, and aplastic anemia. Essentially, we have a failure of the blood-forming organs, and many of the writers mentioned that the over-dosage of radium would cause a fall in the white cells. Blummer, of Yale Medical School, in a study of these cases, found that the blood pictures did not all conform to those of Schultz. He found that the necrotic areas may not only involve the throat, but the gums, esophagus, intestines, and skin.

Thompson and Service reported one case which lived nine days after admission. The daily blood picture was as follows:

	R.B.C.	W.B.C.	Hg.	Neut.	Lymph.	L. Monos	Eosin	Baso.
June 13	3,150,000	1,800	53%	24.7%	74.0%	1.0%	.....	1.3%
June 14	3,230,000	1,200	51%	25.0%	75.0%	.....	.....	.....
June 15	3,150,000	800	48%	21.0%	78.0%	0.5%	.....	0.5%
June 16	2,650,000	500	44%	4.5%	95.5%	.....	.....	.....
June 17	2,800,000	400	41%	15.0%	85.0%	.....	.....	.....
June 18	2,720,000	600	43%	14.0%	85.5%	.....	.....	0.5%
June 19	2,600,000	690	40%	11.0%	89.0%	.....	.....	.....
June 20	2,750,000	1,200	.....	5.0%	91.0%	.....	.....	4.0%

Dr. Reuling states that the onset is similar to that of an ordinary tonsillitis. From the history of the cases on record, a majority showed the onset to be rather sudden, with marked prostration, and a severe sore throat. These patients do not show pallor because there is little change in the red blood cells, hemoglobin, or blood platelets. In the early stages we must differentiate, if possible, agranulocytic angina from Vincent's angina and diphtheria. Most of the writers seem agreed that repeated blood transfusions are the most effective form of treatment.

It is essential that a most thorough systemtic examination be given, including complete blood count, Wasserman, throat and blood cultures, in order to throw some new light upon an otherwise apparently hopeless condition.

Dr. Albert J. Joynt, Waterloo. I think Dr. Reuling is extremely charitable in transferring this malady to the general men, especially since it is a disease of such high mortality.

I confess that I have never seen a case, or at any rate, have not recognized one. What little knowledge I may have on this subject comes from literature and personal communications, but I would like to mention two points in reviewing this very excellent paper. One pertains to the etiology, and the other to the treatment.

Most of the cases that have been reported have had previous good health. This would not indicate lowered resistance. The susceptibility to this angina is probably a result of the blood pathology. That would seem to indicate that this disease was more or less analogous to pernicious anemia. Those cases that improved and seemed to recover have also gone through cycles, not unlike those found in pernicious anemia. Kastlin, who performed thirty-

six autopsies, found all the pathology in the bone marrow, with the exception of a few mucous ulcers and bed sores. There seemed to be nothing uniform regarding blood stream infections, and the most probable reason is that the condition of the blood was such that almost any organism would thrive in it.

Regarding the treatment, in a dozen or more articles that I reviewed, intravenous medication suggested itself; some using blood transfusions, and others, different arsenic preparations. All seem to be equally futile. One clinician was very particular about a gargle that would liberate nascent oxygen. He had only two cases, and they are both dead, as dead as if they had been neglected.

Friedman in four cases has been able to stimulate the bone marrow by light X-ray treatment with a resultant rise of the polymorphonuclear leukocytes. In one instance a shower of immature white cells in various stages of development occurred within a few hours, so that the previous low count was elevated to 10,000, and when the polymorphonuclear count again lagged he produced a similar increase in white blood cells by another treatment. It would seem from the results so far, that the X-ray is our only hope.

FOUR CASES OF PROGRESSIVE JAUNDICE WITH NECROPSY STUDIES*

F. P. MCNAMARA, M.D., Dubuque
Finley Hospital Laboratory of Pathology

Jaundice is a fairly common clinical sign presented by patients in the latter half of life. While at times the cause may be quickly determined, not infrequently it is very difficult or impossible to do so. The following four clinical histories are presented because they illustrate different causes of progressive jaundice in adults. They are also of interest because they give evidence of the value of necropsies. I realize that it is impossible for a written description to give you the same impression as would be obtained if you actually saw the patients. Aside from that very important feature of clinical diagnosis, however, the facts presented are essentially as determined before death.

Case 1.

No. 8278. The first patient was a man aged forty-nine years who complained of "loss of weight, jaundice and indigestion." *The present illness* began with an attack of indigestion four months before admission. He had lost weight steadily since the onset. One month ago he developed jaundice which gradually become deeper. There were no signs indicative of gall-stone colic. The stools were clay color and the urine dark amber.

The physical examination was unimportant except for the condition found in the abdomen and the evident jaundice and loss of weight. The abdominal examination showed an enlarged and moderately tender gall-bladder. The liver's edge was one finger's breadth below the costal border. The other abdominal organs were negative and there were no points of tenderness or pain.



Fig. 1. (Case 1.) Museum specimen showing metastases in the liver; primary carcinoma of the pancreas.

Laboratory and X-ray examination: The urine showed a trace of albumin, a rare leucocyte and hyaline cast and a strong test for bile. The stools were clay color, containing some free fat but no blood. The blood examination showed a moderate secondary anemia, a negative Wassermann and an icterus index of 35 (normal 4-6). The white blood count was 9,000. The coagulation time was five minutes; the bleeding time eight minutes (slightly prolonged). The X-ray examination showed an enlarged gall-bladder, slight stasis and deformity in the duodenum interpreted as being due to the pressure of the gall-bladder.

Pre-operative Diagnosis: Gall-bladder disease with a question of carcinoma of the pancreas.

Operative Notes: At the operation a greatly distended, thin gall-bladder filled with viscid bile was found. The head of the pancreas was enlarged, hard and nodular. The gall-bladder was amputated at the fundus and a tube inserted in the common duct for drainage.

Postoperative Diagnosis: Probable carcinoma of the head of the pancreas.

Subsequent Course: There was temporary relief

* Presented before the Austin Flint-Cedar Valley Medical Society, Decorah, July 16, 1930.



Fig. 2. (Case 2.) Museum specimen showing gall-stones; primary carcinoma of the gall-bladder and invasion of the liver.

due to the operation and a special diet. However, after two months he again began to fail and became progressively weaker until death, eighteen months after the beginning of his illness.

Case 2.

The patient was a woman of sixty-two years, treated in her home. Her chief complaint was a vague stomach distress which she believed was caused by a tapeworm.

The present illness: For three months she had a feeling of distress after meals but later it became more or less constant. She did not know when the jaundice began but at the time of examination it was moderately intense. At no time had she had pain and nothing in her history indicated gall-stone colic.

The physical examination showed a moderately enlarged and tender gall-bladder but no other masses in the abdomen. The general examination was otherwise negative except for the jaundice and signs of senility.

Laboratory examination showed a moderate secondary anemia and an icterus index of 40 (normal 4-6). The stools were clay color but contained no blood. The urine showed a trace of albumin, a few hyaline and granular casts and a strongly positive bile test. The patient refused to have an X-ray examination.

Subsequent course: The patient's jaundice persisted and became more and more intense but her subjective symptoms were never distinct. She persisted in her belief that her trouble was due to a tapeworm until her death which occurred about four months after the onset of her illness.

Clinical diagnosis: Probable cancer of the head of the pancreas.

Case 3.

No. 16322. The patient, a white man aged sixty-five, was admitted to Finley Hospital on March 19, 1930, with a complaint of "itching and jaundice".

The present illness: The patient dated his illness back one year (March, 1929). Up to that time he had always been well. He then developed jaundice, and itching was a pronounced symptom. He continued to work for six weeks when his condition became worse. He was confined to bed for two weeks and for a short time passed considerable blood by bowel. At that time the stools were clay color. After a time he began to improve and the blood disappeared. He returned to work in the middle of August. In September, October, and November he suffered from a rather severe diarrhea with as many as ten bowel movements each night. His appetite was good at all times except during the period when he was confined to bed. His chief complaint was the itching and at no time did he have any pain. On several examinations he did not show any tenderness in the region of the gall-bladder. Repeated examinations of the urine showed bile but no sugar or albumin. In August, 1929, he weighed 145 pounds and at the time of examination weighed 160 pounds.

The physical examination: The patient was well developed but thin. The skin and mucous membranes were moderately jaundiced. The general examina-



Fig. 3. (Case 3.) Primary carcinoma of the duodenum. The probe points to where a section was removed.

tion was negative except as regards the abdomen. The border of the liver was three fingers' breadth below the costal border and in the region of the gall-bladder there was a soft, moderately tender mass.

Laboratory examination: The white blood count was 9,000. There was a moderate secondary anemia. The icterus index was 25. The urine examination showed a faint trace of albumin; a moderately strong bile test and the sediment showed an occasional leucocyte, hyaline and granular cast.

X-ray examination: The lungs were negative. The heart was moderately enlarged and the aorta showed atheromatous changes. The gastro-intestinal examination showed the esophagus and stomach to be negative. The duodenum appeared normal but seemed further toward the left side than is usual. The examination was not continued beyond the duodenum.

Clinical Diagnosis: Obstruction to the common duct, probably due to a stone.

Operative notes: There was some free, straw-colored fluid in the abdomen. The gall-bladder was very large, due to distention, and somewhat thickened. The liver's edge was three fingers' breadth below the costal margin. The stomach and duodenum were negative. The head of the pancreas presented two irregular, hard masses behind the duodenum. The upper one was the size of an olive and slightly movable, seeming to be a stone in the duodenum or common duct. Upon incising, it proved to be in the pancreas. The second mass was approximately one inch below this one and was the size of a prune. This mass was less hard than the other. The gall-bladder was aspirated and a large amount of greenish pus tinged with blood removed. Drains were inserted and the wound closed.

Postoperative diagnosis: Carcinoma of the head of the pancreas and cholecystitis.

Postoperative course: The patient recovered from the operative shock and was in good condition for approximately eight hours. He then began to have signs of hemorrhage and died fifteen hours after the operation.

Case 4.

No. 16434. The patient was a white woman aged twenty-eight, who was admitted to Finley Hospital on March 3, 1930, with a complaint of "jaundice, epigastric discomfort, vomiting and weakness."

The past history: The patient had three children who are living and well. She had always been in good health until about ten months ago. Because of her past history she was sent to the local venereal clinic, where a diagnosis of syphilis was made on the basis of a three plus Wassermann though she had previously had several other negative tests. She received a fair amount of treatment but at somewhat irregular intervals. Her last injections of sulpharsphenamine preceded the development of the jaundice by almost eight weeks.

The present illness: Five months before examination she began to lose weight. About four months later she developed a dry, hacking cough and she noticed that she was jaundiced. She became progressively weaker and her appetite was very poor.



Fig. 4. (Case 4.) Museum specimen showing carcinoma of the pylorus of stomach.

She had a feeling of discomfort after meals; could retain little on her stomach and vomited fairly often.

The physical examination: The temperature was 101 degrees; the pulse was 124 and the respirations were 24 per minute. The patient was fairly well nourished and markedly jaundiced. The eyes and ears were negative. There were a few decayed teeth. There were a few tender lymph nodes on the left side of the neck. The lungs and heart were negative. The abdomen was swollen but tympanitic. The liver's edge could be felt four inches below the costal margin. It filled up the epigastrium and extended well to the left. Over the latter area there were several very large nodules; some seemed to be in the liver and others appeared to be connected with the pancreas or stomach. The spleen could not be felt. The liver was tender, especially on the left. The rest of the examination was essentially negative.

Laboratory examination: The white count was 17,800; the red blood count 3,500,000; Hgb. 55 per cent; Index .78; Icterus index 25; Wassermann was negative. The stools were clay color.

X-ray examination: The thorax and esophagus were negative. The stomach was hypertonic in type and smooth in outline except at the pylorus. A normal pyloric shadow could not be obtained on any of the films or under the screen. There was marked

spasm with delay in the clearance of the barium and the appearance suggested that of a large ulcer encircling the pylorus. Twelve-hour examination showed the stomach empty with the barium throughout the colon. No evidence of pathology was seen in the colon.

Course in hospital: She ran a septic temperature varying between 99 and 102 for ten days. The jaundice increased gradually and she suffered from pain in the upper abdomen. She was discharged on the tenth day without any improvement. She was

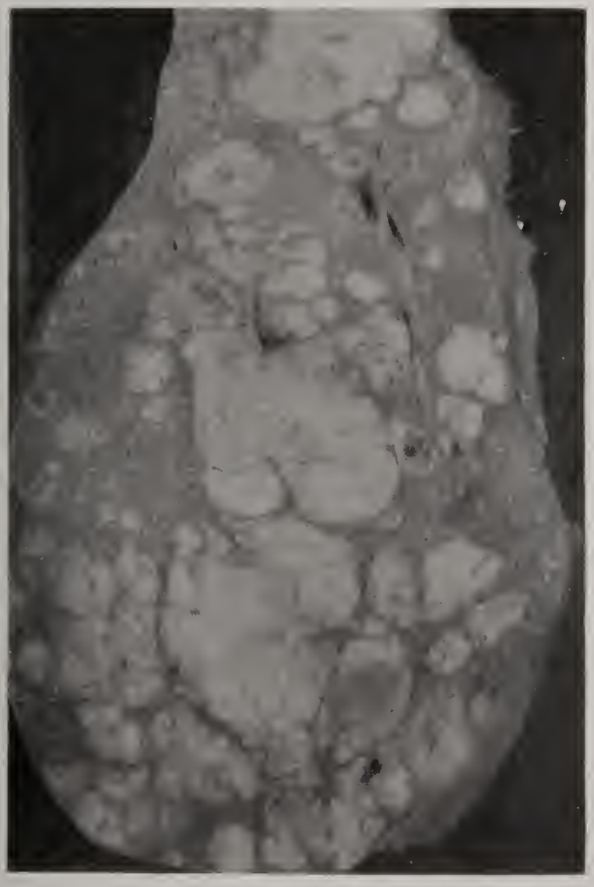


Fig. 5. (Case 4.) Museum specimen showing metastases in the liver; primary carcinoma of the stomach.

readmitted six days later with a temperature of 102. It rose gradually to 103 where it remained for three days and then fell to 98, on the day of death. The jaundice had increased and there was a penetrating, fetid odor from the body. The white blood count was 23,400. She complained of pain in the abdomen. She failed rapidly and died twenty-one days after her first admission.

Clinical Diagnosis: Lues with gummatous hepatitis, peritonitis.

Summary

The first case is that of a middle aged man with some indigestion, a rapid loss of weight and a persistent and increasing jaundice with essentially negative X-ray findings except for a swollen gall-bladder.

The second case is that of an old woman with vague abdominal distress, moderate loss of weight and steadily increasing jaundice. She also had an enlarged gall-bladder.

The third case is that of an old man who had been sick for a year. The onset was gradual but after a time he became critically ill, with hemorrhages from the bowel and jaundice the outstanding symptoms. He then made at least a partial recovery and went back to work. Six months after his original illness he had a rather severe diarrhea but that gradually disappeared and he gained fifteen pounds in weight. The essential symptoms were jaundice and itching. The physical examination showed an enlarged liver and a distended gall-bladder.

The fourth case is that of a young woman with a vague history of syphilis, with a progressive, steadily increasing jaundice of one month's duration. She had frequent vomiting spells; she lost weight for a period of five months and had a fever reaction indicating sepsis. Physical examination showed a mass in the epigastrium, a coarsely nodular liver ascites, pleural effusion and edema of the lower extremities. The X-ray examination showed a deformity of the stomach indicative of an encircling ulcer. Toward the end she developed signs of peritonitis.

In none of the cases was pain a striking symptom and for all practical purposes we can say that each case presented a painless, obstructive, jaundice. In Case Three it was intermittent at first but then became persistent as in the others.

Differential Diagnoses

It is evident that in attempting to arrive at correct diagnoses, we must consider the causes of obstructive jaundice in the latter half of life. There are numerous causes but I have listed below only the more likely ones in the four cases under consideration. They are as follows:

1. Catarrhal Jaundice.
2. Epidemic Jaundice (Weil's Disease).
3. Gall-stones.
4. Cirrhosis of the Liver.
5. Syphilis.
   a. Hepatitis.
   b. Acute Yellow Atrophy of the Liver.
   c. Gummas.
   d. Arsenicals (treatment).
6. Enlarged Portal Lymph Nodes.
   a. Malignant Metastases.
   b. Hodgkin's Disease.
   c. Lymphatic Leukemia.
   d. Lymphosarcoma.

7. Malignant Tumors.
   a. Stomach, Duodenum or Colon.
   b. Liver and Gall-bladder.
   c. Pancreas.
   d. Ovary or Uterus.

Catarrhal jaundice was considered in the first three cases. In the early stages of each, the loss of weight and the jaundice might well have been due to obstruction of the common bile duct with mucus. Usually the jaundice is less intense than in these three cases but this is not always true. The main point that eliminates catarrhal jaundice in the differential diagnosis is the duration of the jaundice, for in this condition it rarely lasts as long as six weeks.

Epidemic jaundice is an acute infection with fever, pain in the back and limbs, splenomegaly and acute nephritis. As the name indicates it occurs in epidemics. The absence of most of the above signs as well as the degree and duration of the jaundice eliminates Weil's disease from further consideration.

Gall-stones were likewise considered in three of the cases in spite of the fact that there were no histories indicating gall-stone colic. While it is exceedingly improbable that a stone large enough to cause obstruction could pass down the cystic and common ducts without colic, it does occur at times and may cause loss of weight and a chain of symptoms similar to those in the first three cases. However, the absence of any evidence of stones upon X-ray examination plus the negative histories make the diagnosis of gall-stones improbable.

Cirrhosis of the liver causes a mild jaundice in the early stages of the condition. At that time the liver is swollen and extends down to the umbilicus or even lower. On palpation it is smooth and tender. There may be an associated ascites. Later the liver decreases in size, due to the fibrosis, and if palpated will be felt to be finely nodular and hard. A mild jaundice may occur but usually it is preceded by ascites which in conjunction with a swollen spleen and the history makes the diagnosis clear. A high degree of jaundice, such as we had in these four cases, occurring in a person with cirrhosis, should cause you to suspect malignant change. We have very little evidence that any of the cases were due to cirrhosis.

Syphilis: In Case Four, syphilis was thought to be a possible etiological factor. It is well known that syphilis sometimes causes a mild hepatitis resulting in slight jaundice during the eruptive stage. Furthermore, the treatment with the arsenicals (salvarsan, arsphenamine, etcetera) occasionally results in sufficient injury to the liver cells to produce slight jaundice. In very rare instances the syphilitic hepatitis is intense and the destructive lesion, characteristic of acute yellow atrophy, is produced. As the liver did not decrease in size in the case in which it was considered it was discarded as a possibility. The arsenicals were considered as unlikely causes because of the degree of the jaundice and the length of time between the last injection and the onset of the jaundice, a period of two months. In late syphilis the liver may be the seat of multiple, small gummata or of a single large one. As a result a diffuse or localized fibrosis may occur. The clinical manifestations of these lesions will depend upon their number, size and location. Jaundice results if there is pressure on the main hepatic ducts or if small gummata or fibrous tissue block the finer bile capillaries. If the patient actually had syphilis it would have been one explanation of her condition though it would hardly account for the septic temperature.

Enlarged portal lymph nodes: The portal lymph nodes are often invaded by metastases from malignant tumors elsewhere in the abdominal cavity. The more common primary lesions are considered under the malignant tumors. Aside from metastatic growths, the portal lymph nodes may be enlarged in Hodgkin's disease, lymphatic leukemia, lymphosarcoma and other rare conditions. In Hodgkin's disease there is usually a generalized adenopathy and it is first noted in the cervical lymph nodes. It is possible, however, for only the abdominal nodes to be affected. The spleen is practically always enlarged in Hodgkin's disease though again it may not be. In such atypical cases a diagnosis can be made only by exploratory operation and biopsy. Lymphatic leukemia is diagnosed by the blood picture. There is one type of lymphosarcoma, apparently arising in the mesenteric lymph nodes, which spreads along the lymphatics to the other abdominal nodes and invades the wall of the intestine. The latter is converted into a rigid, thick tube that has been compared to a garden hose. The neoplasm tends to remain localized in the abdomen and distant metastases are very rare. The disease may be diagnosed by X-ray examination of the intestinal tract or by exploratory operation.

The malignant tumors may be either carcinomata or sarcomata but I shall speak only of carcinomata, as for practical clinical purposes the differentiation is not important. In the absence of any unusual uterine hemorrhage and of any evidence of enlargement of the ovaries, I believe the possibility of pelvic malignancy in the fourth case is remote. In Case Three carcinoma of the colon was thought to be a possibility at one time because of the diar-

rhea and bowel hemorrhage. The history did not state whether the blood was fresh or changed in its passage through the bowel. Diarrhea occurs in cancer of the colon but it is preceded by a gradually increasing constipation and lasts for a few days and is again followed by constipation. The X-ray examination will demonstrate the lesion.

Having ruled out the above causes let us consider the four other types of primary cancer. In the order of their incidence they are as follows:

Cancer of stomach—25 per cent of all cancers.

Cancer of gall-bladder—6 per cent of all cancers.

Cancer of pancreas—2 per cent of all cancers.

Cancer of liver—¼ to ½ per cent of all cancers.

Cancer of duodenum—2 to 3 per cent of intestinal cancer.

Judging by the clinical histories and physical examination, each of the four cases might be gastric carcinoma. The X-ray examination was negative in two cases (numbers one and three) and thus gastric cancer was eliminated. No X-ray examination was made in the second case but in the absence of distress, pain, vomiting or a mass in the epigastrium I believe we are justified in ruling out cancer of the stomach in this case also. In the fourth case there was a lesion encircling the pyloric region and there was a mass in the epigastrium and therefore the patient may have had cancer of the stomach. Clinically, cancer of the gall-bladder was not seriously considered in any of the cases, largely because there was no history of gall-stones, which precede cancer in nearly all instances. The only other distinctive clinical feature of this type of neoplasm is the presence of a mass in the position of the gall-bladder. In the first two cases this was present but was interpreted as a distended gall-bladder.

Cancer of the head of the pancreas was considered in all four cases. In each of the first three it was the final diagnosis, which was based upon the loss of weight, the slight indigestion or epigastric discomfort, and the obstructive jaundice, and by the past operative findings in two cases. In the fourth case pancreatic cancer was considered but as the patient was thought to have syphilis it was believed that the latter condition explained the clinical picture. The X-ray examinations of three of the patients did not indicate any deformity of the duodenum or stomach suggestive of cancer of the pancreas, but this is not uncommon. In some instances there are pressure defects due to enlargement of the head of the gland and in conjunction with a history of indigestion, loss of weight and jaundice, are quite characteristic of pancreatic cancer.

Carcinoma of the liver is a common diagnosis on death certificates but actually is exceedingly rare. Of course metastatic growths are common but the primary lesion should be sought in every case for the sake of accuracy if for no other reason. Primary cancer of the liver is usually preceded by cirrhosis. Distant metastases are rare but the venous channels and adjacent organs may be invaded. It causes great enlargement of the liver with jaundice, ascites, cachexia and fever in about two-thirds of the cases. The spleen is often enlarged, apparently due to the cirrhosis. A diagnosis is seldom made clinically but should be thought of if an unevenly nodular liver can be felt and the jaundice is intensified in a person with a cirrhotic liver. The clinical course is usually rapid and primary cancer of the liver is a rare cause of sudden death.

Primary cancer of the duodenum is both a clinical and a pathological curiosity. As far as I know it has never been diagnosed clinically but only at operation or postmortem examination. The neoplasm may occur in any portion of the duodenum but is often found adjacent to the ampulla of Vater and has been confused with primary cancer of that organ. It may involve the ampulla by direct extension and thus cause obstruction of the bile and pancreatic ducts. There is nothing distinctive in the clinical history but it is possible than the condition may be suspected if the X-ray examination shows a constricting ring or a deformity unlike an ulcer. There is no convincing evidence that the cancer is preceded by ulcer, though this is thought to occur in the stomach.

The portal lymph nodes and liver are often invaded by metastases from the above carcinomata as well as others. While as a rule the primary growths are brought to light by our usual methods of study, I wish to emphasize that at times the primary lesion may be so small as to escape detection whereas the lymph nodes are large enough to obstruct the flow of bile by pressure from outside the main ducts.

From the evidence presented, I believe we must agree with the diagnoses made in the first three cases. However, we should have in mind the other comparatively rare causes of obstructive jaundice; i.e., gall-stones, cancer of the gall-bladder, liver, duodenum or even others. The diagnosis in the fourth case is complicated by the fact that the patient was thought to have syphilis. That brings up the matter of weakly positive Wassermann reactions. No physician is justified in making a diagnosis of syphilis on a single two or three plus reaction unless there are other evidences of syphilis present. The Wassermann reaction is just one sign of syphilis and one which may be the subject of error either in technic or interpretation. While it is true that a child may not give any clue

in its history, there will be some physical change compatible with syphilis. In an adult you should be able to get a history and physical signs indicating syphilis. One of the signs and only one is a positive Wassermann which should be repeated when there is any doubt as to its accuracy. In the case under consideration there was no physical evidence given indicating that she had syphilis unless we interpret the nodules in the liver as being gummata. If they are, they must be very large and in view of the fair amount of treatment, decidedly unusual. The size should cause one to doubt that the masses in the epigastrium and liver were gummata. She had an encircling lesion of the pylorus and had spells of vomiting. At her age we should expect that it was an ordinary ulcer. The size of the lesion and the masses in the liver and epigastrium should also make us think of cancer of the stomach. The temperature in her case as in the others might be explained by a cholangitis occurring as the result of the obstruction to the common bile duct. Without further discussion I shall give the anatomical diagnoses.

POSTMORTEM DIAGNOSES

Case 1.

Carcinoma of the head of the pancreas; metastases to portal lymph nodes and liver; obstruction of common duct with jaundice (Fig. 1).

Case 2.

1. *Chronic cholecystitis and cholelithiasis.*

2. *Carcinoma of the gall-bladder;* metastases to portal lymph nodes and liver; obstruction of common bile duct and jaundice (Fig. 2).

Case 3.

1. *Carcinoma of the duodenum;* metastases along the common bile duct and to the pancreas (Fig. 3); obstruction of the common and pancreatic ducts; cholangitis; jaundice and pruritus.

2. *Right auricular thrombus;* pulmonary infarct with abscess formation.

Subsidiary: Arteriosclerosis; chronic ulcerative tuberculosis of the right lung.

Case 4.

1. *Primary adenocarcinoma of pylorus of stomach;* metastases to regional, retroperitoneal, pelvic and hilic lymph nodes; to liver, peritoneum, ovaries, uterus, lungs and common bile duct (Figs. 4 and 5).

2. *Obstruction of cystic and common bile ducts and pancreatic duct;* dilatation of common and hepatic ducts; cholangitis; jaundice with subcutaneous hemorrhages about face and neck; acute necrosis of pancreas with abscess formation; ascites, pleural effusion and edema of legs; localized peritonitis.

Subsidiary: Chronic and subacute cervicitis; chronic salpingitis with hydrosalpinx; emaciation.

CONCLUSION

Progressive jaundice occurring in adults is always of serious portent. This series of cases illustrates four of the more common causes of the condition and also emphasizes the need for intensive study of patients presenting it. When such studies are made, a correct diagnosis will be reached in the majority of cases. In some, however, this will be impossible even at operation and therefore postmortem examinations are imperative if the medical profession is ever to approach accuracy in vital statistics. Finally, one case demonstrates the fallacy of making a diagnosis on the basis of a weakly positive Wassermann reaction. The supposed presence of syphilis led to the erroneous interpretation of clinical signs which ordinarily would have pointed to a correct diagnosis.

In conclusion, I desire to express my appreciation to Doctors L. H. Fritz, W. A. Henneger, J. C. Hancock, B. Michel and H. A. Stribley of The Finley Hospital staff for the use of their clinical records.

College of Medicine
State University of Iowa

(From the Proceedings of the University Hospital Medical Society.)

UNATTACHED TUMORS FROM THE EMBRYONAL UROGENITAL APPARATUS*

G. H. HANSMANN, M.D., and J. W. BUDD, M.D.

Retroperitoneal neoplasms arising independently of the adult urogenital organs have not been well understood. Until 1880, they were dismissed with the diagnoses of sarcoma or pancreatic cyst. Howship, as early as 1871, noted a composite tumor which compared favorably with the dermoid teratoma commonly found in the ovary, but he did not interpret the histogenesis of it. In 1889 Bassini described a cystic adenoma which compared favorably with a pseudomucinous cystadenoma of the ovary, while Frank in 1894 assigned the histogenesis of a similar tumor to an accessory ovary. From that date to the present there has been, on the average, one case a year added to the world's medical literature. Every now and then a case would add an additional fact until now glomeruli, renal tubules, rete structures, bone, hair, sweat glands, fat, smooth muscle, uterine mucosa, chorion epithelium, etc., have been added to the histology of these tumors. The addition to the literature of those cases which we have had the opportunity of studying, and the collection of the information from all available

reported cases have clarified the situation concerning retroperitoneal tumors not attached to adult urogenital organs. The result is that with few exceptions well established tumors found in these adult organs have been found free retroperitoneally. The interpretation is that they arise from remnants of the embryonal urogenital apparatus.

TABLE I

Summary of Cases upon which this study was based.

Hosp. No.	Age	Sex	Position	Histogenesis	Function	Original Diagnosis	Result	Clinical History
E1902	78	M	RUQ	?	O	Epithelial cyst infected	Operated well	7 mo.
B2061	41	M	LUQ	Sex cell	O	Infected dermoid cyst	Death	36 yrs.
E8941	67	M	LUQ	?	O	Infected epithelial cyst	Death	26 yrs.
Outside	26	M	LUQ	Sex cell	O	Chorio-epithelioma	Death	3 mo.
B11067	26	M	L. L.	Sex cell	O	Chorio-epithelioma	Death	1 mo.
D7405	24	M	M. L.	Sex cell	O	Indifferent carcinoma	Death	1½ yrs.
C5985	2	F	LUQ	Sex cell	O	Neuro-blastoma	Death	3 mo.
C3247	37	M	M. L.	Sex cell	O	Indifferent carcinoma	Death	1 yr.
59861	3	F	L. L.	Sex cell	O	Indifferent fibro-sarcoma	Death	3 yrs.
Outside	2	F	R. L.	Muellerian apparatus?	O	Tumor of urogenital apparatus	Inoperable	?
C1731	70	F	L. L.	Rete ovarii	O	Adeno-carcinoma	Death	6 mo.
E2426	37	F	LUQ	Rete ovarii	O	Adeno-carcinoma	Metastases	1½ yrs.
D232	48	M	LUQ	Mesone-phritic tubules	O	Adrenal cell carcinoma	Removed Jan., 1929 Well Dec., 1930	1 mo.
E1661	51	F	RUQ	Mesone-phritic tubules	O	Urogenital apparatus tumor	Metastases	2 yrs.
D6964	33	F	LUQ	Mesone-phritic tubules	O	Adrenal cell carcinoma	Death	1 yr.
E6888	66	M	R. L.	Metane-phritic tubules	O	Renal cell carcinoma	Death	3 mo.
E2084	41	M	LUQ	?	O	Fibro-sarcoma	Death	10 yrs.

LUQ=Left Upper Quadrant. L. L.=Left Lateral Abdomen.
RUQ=Right Upper Quadrant. R. L.=Right Lateral Abdomen.
M. L.=Mid-Line.

TABLE II

Comparison of free retroperitoneal tumors with those arising in the adult urogenital organs.

Tumors of the Urogenital Apparatus			
	Attached	Unattached	
Histology	Nephrogenous tissue with inclusions		Histogenesis
Adrenal-like cells Glomeruli, bone, Tubules and alveoli	Embryonic renal cell tumors	F-C	Mesonephros
Cords Adrenal cells	Adrenal cell tumors	C	Adrenal cell
Adult renal cells Adult renal tubules	Adenoma Adenocarcinoma	F	Adult renal cell
Glomeruli, rich stroma, tubules	Embryonal adenosarcoma	C?	Renal blastema
Smooth muscle	Leiomyoma Leiomyosarcoma	C	Muellerian tissue?
Fibroblasts	Fibroma Fibrosarcoma	C	Mesothelium?
Fibrous cartilaginous Fat and Bone	Mixed tumors	C	Mesothelium?
Epithelial cyst	Epitnelial cyst	F-C	?
	Genital Tissue with Appendages and Inclusions		
Syncytial and Langhans cells in cords	Chorio-epithelioma	F-C	Sex cell
Large round cell	Embryoma	F	Sex cell
Glandular arrangement, eccentric acini, calcareous deposit	Adenocarcinoma	F	Rete cells
Solid Teratomatous	Teratoma	O	Sex cell
Cystic Dermoid Teratoma	Dermoid cyst	F-C	Sex cell
Epithelial cyst	Epithelial cyst	F-C	?
Alveoli tubules Uterine mucosa stroma Smootn muscle	Endometrioma Adenosarcoma	F	Embryonic Muellerian tissue
Adult endometrium	Endometrioma	C	Adult Muellerian Tissue
Cervical epidermoid carcinoma	Epidermoid carcinoma	O	Adult Muellerian tissue
Smooth muscle	Leiomyoma Leiomyosarcoma	C	Adult Muellerian tissue
Striated muscle	Rabdomyoma R sarcoma	O	Sex cell?
Cystadenoma	Cystadenoma Pseudomucinous	C	Mesonephros
Cystadenoma	Cystadenoma, serous	C	Mesonephros
Fibroblasts	Fibroma Fibrosarcoma	F-C	Mesothelium?

F. Found in this series.
C. Contained in the literature.

A ROUND TABLE DISCUSSION ON NURSING

Significant of trend in the training of nurses may be cited the discussion of this subject by the American Women's Association in New York on March 13th. At their first vocational round table on employment representatives of various nursing and medical organizations in New York City discussed from many angles the alleged over-crowding of the general nursing fields, and offered as a solution; first, the limiting of the enrollment of nurses in training schools, and second, the diverting of graduates into special fields, such as physiotherapy and mental hygiene. The general employment condition existing among nurses in New York State was presented by Miss Alta Dines, chairman of the Personnel Committee of the New York State Nurses Association for the Improvement of the Condition of the Poor.

STATE HEALTH COMMISSIONER'S PAGE

D. C. Strickland, M.D.

The most prevalent diseases during the month of February were scarlet fever, chickenpox, smallpox, mumps and measles in the order named.

SCARLET FEVER

Thirteen more cases of scarlet fever were reported in February than were reported in January. The 554 cases in February this year make an increase of 113 cases over the number for February, 1930, and with the exception of February, 1929 (676 cases) is the largest number of cases to have been reported in the corresponding month since 1924.

CHICKENPOX

Three hundred twenty-five cases of this disease were reported, giving to February, 1931, the largest number of cases since 1924. There was an increase of one case over those reported for January.

SMALLPOX

Like the poor it seems that we shall have smallpox "always with us." Complacency and lack of interest on the part of doctors and the public alike are responsible for the 249 cases of smallpox reported in February. 1928 and 1930 are the only years since 1924 which have had more cases of smallpox in the month of February than did 1931.

MUMPS

Although mumps is mentioned as among the most prevalent diseases for the month, yet there were only 58 cases reported, which number is two less than those reported in January. Those reported for February give to it the lowest number of cases in any February since 1924. This is interpreted to mean that there is no state-wide outbreak of this disease.

THE LEAST PREVALENT DISEASES

Typhoid Fever. One case of typhoid fever was reported in February. In 1926 no cases were reported in this month, but with that exception no February since 1924 has had less than three cases. The three cases reported thus far in 1931 are less than those reported for the first and second months of any of the last seven years.

Diphtheria. The number of cases of this disease (34) reported for February is the lowest ever reported for the corresponding month in the history of Iowa. Eighty cases have been reported for the first two months of 1931, which is 16 less than for the same two months of 1930, 162 less than for the first two months of 1924 and 160 less than for the same period of 1927. Universal acceptance of the use of toxin-antitoxin and the routine recommendation of protection against diphtheria made to parents on the part of practicing physicians would completely and easily eradicate diphtheria from Iowa.

Cerebrospinal Meningitis. The year 1930 saw 106 cases of cerebrospinal meningitis reported. This was 36 more than the next highest year, 1929, and 91 more than the lowest years, 1924 and 1925. The number of cases reported in January and February of 1931 afford basis for the belief and prediction that cerebrospinal meningitis will be at least as prevalent as in 1930 and possibly that the figure for 1930 will be exceeded.

* * *

Four trips were made by the Epidemiologist, three for scarlet fever and one for suspected smallpox. Two talks were given.

* * *

The Sixth Annual Meeting of the Iowa Public Health Association was held April 2-3, 1931. Governor Turner addressed the meeting on the first day and Dr. Taliaferro Clark of the U. S. Public Health Service spoke on "Maternity and Child Hygiene" at the banquet on Thursday. The afternoon session on Friday was devoted entirely to the reports of the four sections of the White House Conference on Child Health and Protection. Sixty-six members of the Association in good standing registered at the meeting as well as 139 guests. The attendance at the banquet was 102.

The JOURNAL of the Iowa State Medical Society

ISSUED MONTHLY

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THE FAMILY DOCTOR AND THE SPECIALIST

In the January issue of *Southern Medicine & Surgery* there appears a unique series of articles dealing with the problem of the relations of the family physician to the specialist. These articles have been prepared by the various department editors of the journal, each of whom is a specialist in some branch of medicine or surgery. The symposium is of interest from many angles and the viewpoints expressed, while differing materially in detail, are in agreement in the thought that the family doctor must be considered the backbone of medical practice and, as the name implies, the family advisor. He is the one who is consulted when sickness arises and on whom the family relies for advice. It is obligatory that he assume as a vital part of this relation that the advice be at all times for the best interest of the patient. With this in mind, these specialists agree that the physician will in the exercise of his judgment refer any and all cases requiring attention which he, because of his training, is unable to furnish.

Dr. James K. Hall, psychiatrist, views all successful practitioners as psychiatrists, since the success of any physician depends upon his ability to win the confidence of his patient, and more than this, maintain confidence throughout the treatment. In closing his remarks, Dr. Hall states, "Medical specialists may increase in number. May God prevent such a catastrophy."

This expressed attitude is shared by Dr. Hamilton W. McKay, urologist, who believes that the family physician should not rely upon specialists, but should so equip himself that, except for consultation, only the most unusual and special cases will require reference to a specialist.

He states relative to this point, "If he is able to diagnose his cases properly and knows the pathology, almost everything else will be added unto him including a large practice and the appropriate treatment for each and every ill."

J. Donald MacRae, Jr., roentgenologist, states, "The man who does general practice naturally has to have a considerable knowledge of each of the specialties. Radiology is perhaps the line in which he does the least amount of work."

These quotations illustrative of the several viewpoints reflected in this symposium emphasize the importance of the thorough training of the family doctor, contradicting the viewpoint frequently held by specialists that the family physician should be merely a clearing house feeding the specialist.

Dr. Joseph A. Elliott, dermatologist, states, "No specialist should assume that he is the court of last resort and that all cases in his specialty should be referred to him," but according to Dr. O. L. Miller, orthopedic surgeon, "Let each worker be trained, have a conscience, and let that conscience be the guide."

A fitting tribute to the family doctor is included in the discussion of Dr. George H. Bunch, surgeon, who states, "In conclusion, we think the general practitioner, for unselfish devotion to duty, is the noblest work of God. There is no other being who has such sympathetic understanding of human nature, of the good and the bad in all of us. Overworked and underpaid day and night he does his best for the relief of human suffering. We think it a shame that he has to die to get to heaven."

PRIVATE GROUP CLINICS*

A study of private group clinics in the United States* made for the Committee on the Costs of Medical Care by C. Rufus Rorem has been issued as Publication No. 8 of the Committee.

There are approximately 150 such clinics, with a total medical personnel of about 2,000. They represent a comparatively recent development in medical practice, most of those now in existence having been organized since the World War. Almost none are to be found in the eastern states; the majority are in the middle west.

The average capital investment in plant and equipment, excluding hospital facilities, was $10,000 per practitioner in seven clinics which sup-

*Private Group Clinics: The Administrative and Economic Aspects of Group Medical Practice as Represented in the Poilicies and Procedures of 55 Private Associations of Medical Practitioners, by C. Rufus Rorem, Ph.D., C.P.A.; Committee on the Costs of Medical Care, Washington, D. C.

Editor's Note: In presenting this resumé of the findings of the Committee on the Costs of Medical Care, we are prompted by the fact that, (1) this report is perhaps the most authoritative one which has as yet been prepared on this subject, and that (2) the problem of group practice is one largely concerning the Midwest where this form of practice is at this time most common.

plied information on this point. The average capital investment in medical equipment and apparatus was $3,600 for 217 practitioners in nineteen clinics supplying information.

There are two general classes of clinic practitioners: those who share in the ownership of the clinic assets and participate in its profits; those employed solely on a salaried basis. The former group is composed of relatively older men. Data from 34 clinics revealed an average of 20 years since graduation from medical school for the "owners" and 8 years since graduation for the "salaried" physicians.

Of 415 clinic physicians listed in the 1929 American Medical Directory, 337 were members of the American Medical Association. Clinic physicians were found to belong to specialized associations to a greater extent than independent practitioners in the same communities, a result, in part, of the fact that a larger percentage of clinic members are specialists.

The distribution of the various specialties among 50 clinics was as follows, indicating those groups in which each specialty was represented by at least one practitioner: internal medicine, 50; surgery, 50; eye, ear, nose and throat, 46; obstetrics, 37; urology, 35; pediatrics, 30; X-ray, 27; pathology, 26; dentistry, 17; gynecology, 17.

Perhaps the most striking development in group clinic practice is the "business office," a separate department under a lay business manager who is an employee and whose duties and responsibilities are determined by the clinic physicians. Financial dealings with patients usually rest in the hands of these business managers, physicians wishing, it appears, to have as little of these as possible although their wishes with regard to the establishment of fees prevail.

According to statements by forty-two clinic managers, clinic fees appear to be regarded by the general public as neither higher nor lower than those of local doctors in private practice. Twenty-one managers say their fees are "about the same," eight say they are "higher" and thirteen that they are "lower" than those of independent practitioners.

The practice of the typical private group clinic is essentially local. The majority of patients, managers say, are persons of moderate means, with a considerable number who might be classed as well-to-do, and a few others who are very poor.

Approximately one-fourth of 60,000 patients served in fourteen clinics in 1929 were hospitalized during diagnosis or therapy. Approximately 10 per cent of 41,000 patients in ten clinics were treated by major surgery. In twenty-one clinics, 528,000 visits by patients were received by 215 members, an average of 2,459 per practitioner.

Data were received from twenty-seven clinics regarding gross and net income per practitioner. Gross incomes ranged from $10,708 to $25,606, and net incomes from $5,960 to $17,449. The average gross income for each of the 314 practitioners was $14,908, and the average net income, $9,747.

The conclusions drawn by Mr. Rorem from his study embrace the following:

"I. Group clinics are in direct economic competition for the medical service which constitutes the major portion of the practice of independent practitioners.

"II. The economic success of group practice depends upon the degree of utilization of the capital investment and of the time of the individual practitioners. The medical service of a clinic cannot usually be adjusted to the convenience of a patient as easily as can the services of an independent practitioner. Where, however, a patient requires the services of several specialists he can probably obtain treatment with less inconvenience and expense at the office of a clinic than from separate practitioners.

"III. The members of private group clinics generally make an effort to maintain a personal relationship between physician and patient.

"IV. The volume of medical service carried on by a private group clinic makes possible the establishment of a specified maximum fee for difficult individual cases and for complete annual service to groups of patients.

"V. Clinics have in general provided net incomes and working conditions for physicians which make possible the continued development of group practice. The removal of financial and administrative responsibilities from the individual clinic practitioner has made him more completely available for professional service, and has, in some clinics, increased his opportunities for scientific research and development.

"VI. The employment of business managers has usually resulted in increased administrative economy and efficiency. The establishment both of fees and of collection policies is based upon financial data obtained through conventional business methods. Inasmuch as the financial status of a clinic patient is usually investigated, group clinics probably perform less 'free service' than would an equal number of independent practitioners doing the same volume of work.

"VII. Private group clinics, through their available equipment and their coordination of medical specialists, are in a position to fulfill the basic requirements of good medical care with economies

from which either or both the clinic members and the public may benefit."

THE WOMAN'S AUXILIARY TO THE A. M. A.
2. NORTH CENTRAL STATES

Looking backward, with pleasant memories to Detroit, and forward with delightful anticipations to Philadelphia we find this group of states all doing something of common interest.

In the January *Journal* of the Indiana Medical Society, the Auxiliary President stresses the importance of more constructive work on the part of her organized county groups. "Physicians' wives," she says, in her New Year's address, "hold an enviable position in being privileged to have a part in a world wide health program, and I would urge every physician's wife to bring before other women dependable knowledge and a just appreciation of the real spirit and purpose and actual achievements of the medical profession." So from Indiana we know we are to have constructive work during this year. Physicians as a class are not prone to participate in legislative matters, but when four distinctly separate bills, which effect the profession directly are presented during one session of a State's Legislature, it is time to be up and doing.

Such is Indiana's situation this year and the doctors of the Seventh district have thought it worth while to instruct their Auxiliary members on these subjects that their influence may be properly used. The Indiana *Journal* never fails to give the Auxiliary space, and it is little wonder the Indiana women are up and coming when they have such editorial notes to enlighten and guide them in their constructive program work, as one finds in this same *Journal*.

Kansas is slowly getting a few things accomplished. A world wide depression has rendered prophets quite fameless abroad as well as at home, but the doctor's wife in Kansas is coming into her own, and we prophesy that the Auxiliary will climb to the top due to the indomitable spirit of the leaders in that state.

In Illinois the motto might well read, "Builders we are, and builders we must ever be. Builders, not in stone that shelters life, but builders in life." We find good constructive programs of well-balanced educational value, we find a journal ever ready to broadcast Auxiliary news, and, best of all, we find a healthy organization line-up and an advisory board from their Medical Society. Several of their County groups are having their members get busy with the "Health Audit Program."

One project worthy of mention comes from Vermillion County on the Eastern boundary of the state. The County Auxiliary put on the Health Institute in Danville last November. A member from every agency in the county working out any kind of a health program, was included in the personnel of the speakers. It was for just one day, but it was worth 365 as a rouser for Auxiliary work. It really was sort of a Christmas seal campaign opening, a get-together of Club women, and P. T. A. groups in the county. And what a wise idea for a medical auxiliary to have the head lines in the plans for such a "Health Day."

Wisconsin, Iowa and South Dakota are among the latest States to join the National Auxiliary. Organization is the keynote for their work, and the National Study envelopes are offered as program material. Right now if the modern doctor's wife needs to get one thing more than another from her organization, it is the knowledge of what is going on in this world, especially the world of medicine. Women are discriminating more carefully in the clubs they are joining. They are asking what membership will mean to them, what they will get out of it. For that reason the subjects for study should be more carefully chosen, and the roll call should be made to count for something more than jokes and quotations from forgotten poets. It isn't a pleasant feeling for a busy mother who rides miles to a meeting to say when it is all over, "I can't say I know any more now than when I started." And so we find these three states getting themselves established on a firm foundation, with the national program envelopes scattered far and wide to aid and encourage Auxiliary members, and prospective members.

Montana and North Dakota are debating pro and con, but as Mrs. Hoxie said in her Detroit report, "I believe it will be a mistake from now on to organize a new state auxiliary unless it appears reasonably certain that there is interest enough among the doctors who want the auxiliary, so they will foster it and stand back of it." And so we leave Montana half-hearted about forming an auxiliary, and North Dakota in the air.

We find Michigan giving intelligent cooperation with state and county officials. Women, like men, are interested in the improvement of civic affairs and healthful living and are realizing that they need to be armed with a definite knowledge of health laws and public health practices.

Missouri is in a very healthy condition. We find that Mrs. A. B. McGlothan, the President-elect of the Woman's Auxiliary to the American Medical Association, attended President Hoover's

Editor's Note: This is the second of a series of four articles to be presented by the committee on publicity of the Woman's Auxiliary giving a general survey of their organizational work. This installment was prepared by Mrs. James Blake, Second Vice President of the Woman's Auxiliary.

White House Conference for Child Health and Protection, held in Washington, D. C., February 19 to 21. Mrs. G. H. Hoxie, the President for last year, also attended the White House Conference.

Mrs. A. W. McAlester tells us the women of Missouri are finding the study envelopes, published by the Education Committee of the Woman's Auxiliary to the American Medical Association, most interesting and instructive. The studies on "Common Defects in Children," and on "Diphtheria," "Smallpox" and "Typhoid Fever" were recommended by the Department of Health in the Missouri Branch, National Congress of Parents and Teachers, for use on Parent Teacher programs. Eight hundred copies of each were distributed for use in Parent Teacher units. Three hundred were requested and supplied for use in Parent Education classes. Requests are constantly coming in for additional copies of the studies for use by teachers and Parent Teacher units. The Department of Public Information of the Extension Division of the University of Missouri is including these studies in its suggested programs for clubs in the Missouri Federation of Women's Clubs, and P. T. A. programs. This department requested back numbers of *Hygeia* for use in such programs. Three hundred copies of *Hygeia* were supplied by women in the state and by the circulation manager and are being extensively used in club programs. The Missouri Chairman of Public Relations is planning to have a copy of each of the studies, "Common Defects in Children," and "Communicable Disease Control," sent to each county school superintendent in the state. Several of the County Auxiliaries are using the study envelopes in their programs.

Mrs. M. P. Overholser of Harrisonville, Mo., has been appointed chairman of Public Relations in the Missouri Auxiliary. This Auxiliary maintains a scholarship for a medical student, per capita quotas being assigned to each county auxiliary.

They also have sent in 30 per cent of the total number of *Hygeia* subscriptions recorded from all auxiliaries from January 1, 1930, to January 1, 1931. Some county auxiliaries provide *Hygeia* for all their teachers. Among these are Buchanan, Gentry and Lafayette. Cape Girardeau County Auxiliary has just finished paying a $1,000.00 pledge to a hospital in the city and is now ready for another kind of work. They are a live group and certainly work hard to be able to accomplish so many wonderful worth while things.

Minnesota, the North Star State, has had a busy and successful year in organization. The President and Organization Chairman have visited over the state and planned meetings and educational program with many county groups. In October the International Medical Assembly met in Minneapolis, and at this time the Hennepin County Auxiliary celebrated its twentieth anniversary by being hostess for five days to the visiting doctors' wives. A great many social affairs and an Educational Day, which included a speaker on Public Health, were features. Hennepin County is having a year with a definite program. Each month a speaker is scheduled, and one meeting during the year is reciprocity day and each Auxiliary in the state is invited to send visitors. This group features philanthropic work for T. B. patients at Glen Lake and do much for the library at the Sanatorium. They have helped the Medical Society furnish their library and club rooms, spending $1,000.00.

Ramsey County does much the same work. They have a scholarship fund for medical students. St. Louis County is noted for work in the public relations field. The state medical *Journal* gives a page to auxiliary news. One of the other Counties takes care of a nurse's scholarship. The Minnesota Auxiliary has a splendid Advisory Board and a page in the state *Journal*. The President was one of the speakers on the program for the Annual Conference of Secretaries of the Component Societies of the Minnesota State Medical Association, held in St. Paul the first week in February. This was the first time the Auxiliary had been asked to take part in this annual affair. Mrs. Hesselgrave's talk was on "Uses of the Auxiliary."

And so, closing my review of the work of the North Central Group of States may I say again—

Builders we are, and Builders we must ever be.
Builders not in stone that shelters life, but
Builders in life itself—ever remembering the future of the world, for generations to come depend upon what we *think* and *will* and *do* today.

EXAMINER RECOMMENDS CLOSING OF RADIO STATION KTNT

Chief Examiner of the Federal Radio Commission, Ellis A. Yost, as a result of a recent investigation of radio station KTNT of Muscatine (Norman Baker owned) reported to the commission that the station now operating on a frequency of 1170 Kilocycles "does not warrant the further assignment of this frequency to the applicant station." He contended that station KTNT was serving programs which subordinated the interests of the listening public to the interests of the licensee. He said a license to operate a radio station was in the nature of a public franchise and should be used in the interest of the public and not for the personal interest of the owner.

"In the broadcasting of station KTNT public interest, convenience and necessity have been made a mere adjunct to the personal business of the licensee.

"The American Medical Association, having disagreed with Baker's theories and practices in connection with the Baker Institute, became the subject of venomous broadcast attacks by Baker from station KTNT, the association being referred to as 'Amateur Meat Cutters' Association' and 'medical trust,' and members without exception being held up to the public as being 'unscrupulous, immoral, inefficient, money-mad malpractitioners.'"

When advised of the examiner's report Norman Baker is said to have stated that in the event his license was cancelled that he "will undoubtedly make efforts to secure a station in Mexico." "In fact, we are already arranging for branches of the hospital throughout the country. We hope to have a branch established in the east within four weeks." It would seem that Baker, like Brinkley of Kansas, will attempt to defeat the federal control of radio broadcast by carrying his station just beyond the border and using sufficient power to carry the message of his alleged cancer cure, tires, gasoline, radio equipment and books over the United States, in defiance of the spirit of this Federal law.

CANCER CONTROL

"Cancer is today the outstanding problem in medicine and public health; it threatens the ascendency of all other causes of death . . . education both of the medical profession and of the public is the most essential part of the present active campaign for the prevention and cure of cancer."

(William H. Welch, M.D., in Cancer: International Contributions to the Study of Cancer in honor of James Ewing. Philadelphia, 1931.)

The American Society for the Control of Cancer, with headquarters at 34 East 75th Street, is conducting an advertising campaign for the early diagnosis of this modern plague—cancer—running especially prepared, informative articles upon this subject in many popular magazines, journals and newspapers. In one of these articles they strike in boldface type the caption: **Don't Fight Cancer Alone,** followed by a secondary title, a little less conspicuous but still boldface—A Grave Responsibility Rests Upon the Family Physician. Here is food for thought upon the part of the physician. In the first place, this announcement implies that the family physician must and will assume the responsibility for the early recognition of cancer if his cooperation is sought. A second implied thought indicates that the physician must be competent and well informed or violate this trust.

The advertisement, however, does not trust to implications. Referring to the responsibility which rests upon the family physician it states:

IT IS HIS DUTY:

To keep abreast of progress in cancer research and clinical experience.

To warn his patients of the early symptoms of cancer.

To insist upon periodic health examinations which will lead to the correction of precancerous conditions and the detection of early cancers.

A campaign such as this cannot fail to stimulate a thoughtful consideration of this grave problem and produce results in a saving of lives uselessly sacrificed on the altar of ignorance and procrastination.

THIRD CONGRESS OF THE PANAMERICAN MEDICAL ASSOCIATION

The Organization Committee of the Third Congress of the Pan American Medical Association has issued a cordial invitation to those who are interested in medical interchange among English, Spanish, French and Portuguese speaking doctors of Panamerica for our next meeting which will be held in the City of Mexico from the 26th to the 31st of July, 1931, under the auspices of the Government of the Republic of Mexico.

This medical conference meets for the purpose of maintaining and promoting a more intimate understanding between the medical men of the New World, and with the efforts of many prominent North and Latin American physicians, a great success has been accomplished in the past meetings.

The proceedings of these Congresses reveal a record of achievements so necessary for the better scientific knowledge among our countries, and a definite step toward international medical progress.

Mexico, though so close to home and filled to bursting with the things we like to see and to enjoy—beauty, history, gayety, novelty, hospitality—is too little known by Americans. There is much in Mexico that fulfills every wish of those who travel for pleasure and diversion and also for those interested in educational, public health and scientific institutions.

Information can be obtained from: Dr. Francisco de P. Miranda, Executive Secretary of the Organization Committee, Departamento de Salubridad Publica, Mexico City, Mexico, or Dr. Con-

rad Berens, Treasurer Panamerican Medical Association, 35 E. 70th St., New York, N. Y.

DR. FRANZ HASLINGER COMING TO DES MOINES

It will interest the eye, ear, nose and throat men of Iowa to learn that arrangements are being made to bring Dr. Franz Haslinger of the Hajek Clinic, Vienna, to Des Moines for the week, May 4th to 8th, inclusive, to give a course on the "Nose and Sinuses."

Probably no instructor offering courses of this kind has ever developed a better teaching technic or has utilized the visual method to the extent that Dr. Haslinger does in this course. Outstanding men in this section who have studied with him in Vienna feel that he is one of the best if not the best, instructors with whom they have come in contact.

This course is open to members of the Iowa State Medical Society, who limit their practice to diseases of the eye, ear, nose and throat. No more than twenty men will be permitted to take the course. Already fifteen men from various cities in Iowa have made application to take this work, so the success of the course is now assured. The balance of the vacancies will be filled in the order that applications are received. A nominal fee will be required of participants.

Further detailed information may be had by writing to Dr. C. L. Chambers, 903 Equitable Building, Des Moines, Iowa.

CERTAIN COLLECTION AGENCIES APPROVED BY MEDICAL ECONOMICS COMMITTEE

One of the most frequent services asked of the state office by members and by county socities has been a report upon or appraisal of various collection agencies or systems which were being presented continuously to physicians in different parts of the state.

An accumulation of such requests, together with the applications of certain collection agencies to be privileged to advertise in the JOURNAL OF THE IOWA STATE MEDICAL SOCIETY, was laid before the Committee on Medical Economics at a meeting held in Des Moines, December 1, 1930, since the Publication Committee had decided to admit only those agencies which were approved by the Medical Economics Committee. At that time a careful plan was laid down for collecting information regarding such agencies and evaluating their services and methods of operation. At an all-day meeting of the committee on March 15, sufficient data had been collected to appraise certain agencies and three which had applied for advertising space were formally approved at that time: The Business Men's Adjustment Bureau, Des Moines; The Iowa Adjustment and Credit Company, Cedar Rapids; and The National School of Honesty, Des Moines. (Announcements of these agencies will be found in the advertising pages of this issue.)

The following formal statement of the committee regarding the action taken is printed on a card issued to each of the approved agencies: "This is to certify that the ..... has been approved by the Medical Economics Committee of the Iowa State Medical Society as offering a satisfactory type of collection service to Iowa physicians. This agency has signed the following agreement with the Medical Economics Committee: 'I hereby agree to have any differences between this agency and the members of the Iowa State Medical Society referred to the Committee on Medical Economics for adjustment.' This approval is in effect until January 1, 1932, but is subject to withdrawal at any time and may be renewed on that date."

The issuance of the card was planned as a service to the members of the Iowa State Medical Society so that they might immediately know whether or not salesmen approaching them upon collection matters were representing agencies which have been appraised and approved.

A SPECIAL ISSUE OF THE RADIOLOGICAL REVIEW

The March, 1931, issue of *The Radiological Review* (Chicago), is devoted entirely to Radium, and is the fourth annual "Radium Number" of this publication.

All the articles are written exclusively for this issue, and collectively they can be considered to present the present status of Radium Therapy as practiced in this country. The presentations are from among the leading radium therapists of America and include such names as Healey, Levin, Kaplan, Eller and Fox of New York, Simpson of Chicago, Quigley of Omaha, Withers of Denver, Keith of Louisville, Murphy of Minneapolis, Bowing and Fricke of Rochester, Minnesota, etc.

Interest in radium is not on the wain, but on the contrary is becoming more firmly established in our armamentarium. While it is true that radium is useful in a comparatively small number of afflictions to which the human body is heir, it is so effective that it is truly "invaluable." Who will deny the remarkable results achieved by radium in the treatment of skin cancer, menopausal uterine hemorrhage, carcinoma of the cervix, and certain types of nevi?

METHANOL POISONING

The Journal of the American Medical Association has pointed out a new hazard from a poisonous gas, methanol, or methyl alcohol, used as an antifreeze mixture in radiators of automobiles. This poison gas is given off when the radiator of the car becomes heated. If methanol is taken in frequently repeated small doses it induces blindness; and in larger doses, either by stomach or lungs, it may cause death.

Doctor Bierring Honored by Colleagues

Hailed by his colleagues as "Dean of the Iowa Medical Profession," Dr. Walter Lawrence Bierring, of Des Moines, was shown well-deserved honor by a group composed of more than one hundred of his associates, friends, and former students at a testimonial dinner given by the Medical Library Club of Des Moines, on the evening of March seventh, at the Des Moines Club. The President, Dr. Charles M. Wertz, presided and introduced Dr. Daniel J. Glomset as toastmaster. In recounting the attainments of Dr. Bierring and paying tribute to his efforts in the advancement of medical teaching and practice, the eight speakers participating responded to the common toast of the tree—*Arbor magnificus var. Bierring*. In his introductory remarks, Dr. Glomset referred to the distinguished guest as a "Sturdy Pine" rooted in the substantial soil of a wholesome heritage which, favored by the rain and sunshine of an inspiring environment, struggled through many disappointments to raise its head among the stars in glorious achievement. The speakers followed the symbolism suggested by the remarks of the toastmaster, and in tracing the biographical history of their honored friend frequently referred to the pine in its exemplification of life.



Dr. Walter Lawrence Bierring

Dr. Hilding Berglund of Minneapolis spoke from the theme, "The Roots," and in fascinating detail recounted the story of the stock from which this sturdy pine was to grow. He began his inspiring story with the Bjerrings in their native Danish land, primitive in educational attainment, but sturdy in the strength of honest toil and the wholesome living of a sea-faring folk. He traced the wandering of a progenitor, Captain Vitus Bering, who, following the sea, discovered and named the Bering Strait between America and Asia. The travels of Jeppe P. Bjerring, explorer and sailor, father of Dr. Bierring, were colorfully presented by the speaker, who traced his career from his boyhood in Denmark through many nautical wanderings and adventures, through the rigorous naval campaigns of the Civil War after his immigration to the United States and finally to his location in Davenport, Iowa, in 1866. Here some two years later, a son was born on July the fifteenth, to whom was given the name of Walter Lawrence Bierring, and who, in his later life was to again bring honor to the name so signally distinguished by his sturdy ancestry.

Dr. Karl Vollmer of Davenport, a college classmate, responding to the toast, "The Sapling," portrayed the early educational advantages of this boy, carrying his biographical sketch up to his entrance to the Medical Department of the State University at Iowa City in 1889. He indicated that those traits of studiousness, loyalty to purpose, and brilliancy of thought, which were to characterize the man, were evident in the days of boyhood and youth. He told of undergraduate days in the medical school, and after graduation of their association in Vienna and other European medical centers. The inspiring contact with the medical masters of that period had a profound influence on Dr. Bierring's subsequent career.

Dr. Elbert W. Rockwood, Professor of Chemistry at Iowa City, responded to the toast, "The Young Tree," describing the advantages and shortcomings of the three-year medical course offered at the State University at the time when Dr. Bierring entered as a student. He felt that perhaps the most important element in the course was his association with Dr. William Drummond

Middleton, "An association calculated to give an ethical viewpoint on medicine not to be gained from the printed curriculum." He discussed his graduation in 1892, his studies in Vienna, Heidelberg, and the Pasteur Institute of Paris, and of his appointment as the first Professor of Pathology and Bacteriology at the State University of Iowa in 1893, and as Professor of the Theory and Practice of Medicine in 1903.

Dr. William Jepson of Sioux City, discussing "The Branches," paid fine tribute to Dr. Bierring as a colleague and associate in the faculty of the University, stressing the spirit of scientific cooperation attendant upon his activities in their frequent hospital contacts. He told of the developments in the teaching of clinical medicine at Iowa City during the period in which Dr. Bierring so ably served as Professor of Internal Medicine, of his many valued contributions to medical literature, and of his enthusiastic sponsorship of the newer unfoldings of medical science in their applications at the bedside.

Dr. John Hiram Peck, of Des Moines, speaking from the theme, "Growing Taller Still," told of the removal of Dr. Bierring to Des Moines (1910), where he engaged in a consultation practice and became Professor and Head of the Department of Medicine in Drake University, a position graced by Dr. Bierring until the closing of the school in 1913. He told of his presidency of the Iowa State Medical Society in 1908, of his presidency of the State Board of Health (1913-1921); of his service as Chairman of the Section of Pathology and Bacteriology in 1907, and Chairman of the Section on the Practice of Medicine of the American Medical Association. He spoke of his election to membership in the national honorary Medical Society, Alpha Omega Alpha, in 1921, and of his selection as President of this scholarship fraternity in 1924 for a six year term and re-election in 1930. He dwelt at length upon the signal honor of Honorary Membership of the Royal College of Physicians of Edinburgh (1921), "for distinguished services in promoting reciprocity between Great Britain and America in matters of Medical Education." Cited as a more recent honor was his election as Regent of the American College of Physicians in 1930.

In his closing remarks he paid high and befiting personal tribute to Dr. Bierring as his former preceptor and associate.

"More Branches," the toast of Dean Henry Houghton of Iowa City, was interpreted in terms of a quotation from the biblical ode, The Psalms, " . . . he shall be like a tree, planted by the rivers of water, that bringeth forth its fruit in its season, whose leaf also shall not wither, And whatsoever he doeth shall prosper." In eloquent comparison he likened the life and attainments of Dr. Bierring to such a tree, stating in his closing remarks that this tree bore not only the fruits of achievement and success but blossoms of two kinds, "one tipped with the golden petals of celebrity, the other which exhales the fragrance of a talent for friendship."

In masterly address, Justice Frederick F. Faville, of the Iowa Supreme Court, and life-long friend of Dr. Bierring, under the caption of "The Cones," brought greetings from the Legal Profession and a personal tribute to his honored friend. A poem of his own making was introduced into his remarks by the Justice which reflected both masterly skill in composition and genuine personal affection in sentiment.

"The Top Among the Stars," as explained by Dr. Robert Bruce Preble, Professor of Medicine at Northwestern University Medical School, Chicago, referred to Dr. Bierring's contribution toward the advancement of medicine by his activities on various educational boards, faculties and committees, notably his long and valued service on the National Board of Medical Examiners, Commission on Medical Education, and his contributions as Secretary-Editor of the Federation of State Medical Boards since 1915. The speaker felt that these many activities to raise the standards of medical education bore testimony of the untiring efforts of Dr. Bierring in this most estimable endeavor, more significant even to the next generation than to this. He made frequent reference to the early friendship formed in Vienna and the happy fellowship maintained ever since.

In his inimitable fashion, Dr. Daniel W. Morehouse, President of Drake University, compared the life of the honored guest to that of a "Star among Stars," indicating that as stars varied in magnitude, so men by their skill and attainment in service classified themselves in magnitude. Dr. Bierring by his wisdom founded upon wide experience, tactfulness, and statesmanship, qualified to a classification of a star of first magnitude.

An interesting feature of the program was a series of lantern slides showing the different stages in the life of "The Tree."

Greetings and appreciation from the Medical Study Club were reflected in the brief, but well chosen, remarks of Dr. Russel C. Doolittle of Des Moines. A volume of letters of friendship and respect from friends detained from the dinner, was presented to Dr. Bierring, by Dr. Fred Moore, on behalf of the Medical Library Club, as a closing ceremony of the evening.

HOUSE OF DELEGATES TO MEET MAY 12, 1931

Last year at Marshalltown the House of Delegates met the day before the general session of the Iowa State Medical Society. This arrangement for the most part seemed to meet with the approval of the members of the House of Delegates. This plan gives the delegates an opportunity to transact a major portion of the business before the scientific meeting begins, and thus affords a chance for them to attend the general sessions. Because of numerous requests that this arrangement again be carried out at our May meeting this year, I am hereby issuing a formal call for a meeting of the House of Delegates of the Iowa State Medical Society for May 12, 1931, at one o'clock p. m. at the Hotel Fort Des Moines, Des Moines, Iowa.

The House of Delegates this year will be called upon to consider problems of paramount importance to the profession and every member should prepare to be present promptly on time. Among the outstanding matters for discussion will be the reports of:

The Committee on Medical Economics:
—Suggested Fee Bill
—Proposal for Malpractice Insurance

The Committee on Medical Education and Hospitals
The Speakers Bureau
The Legislative Committee
The Rearranging of Councilor Districts

W. A. Rohe

President.

SPEAKERS BUREAU ACTIVITIES

Health Education

Members of the Iowa State Medical Society, having so recently authorized the organization of a Speakers Bureau for the purpose of carrying on health education, will be interested to learn of the recent activities of the Academy of Medicine of Cleveland, Ohio. This month they took the first step toward the establishment of a health education foundation, by setting aside $10,000 as a start for health education work. This is the first foundation in the United States devoted exclusively to the study and development of health education.

This new foundation has already outlined an extensive program of work. Among other things it will provide public health lectures and carry on publicity in the interest of health through paid space in publications, through radio broadcasting and through group or individual instruction.

Some of the activities of this foundation are the same as those now undertaken or proposed by our own Speakers Bureau. Such a movement may eventually grow out of our Bureau. The Cleveland foundation grew out of the health education committee of the Cleveland Academy of Medicine and this committee in turn supervised their Speakers Bureau. Present trends in Iowa already indicate that the Speakers Bureau Committee may broaden into a Health Education Committee if it is permitted to continue functioning.

The essential distinction between the health education foundation of Cleveland and our own Bureau is that one is established on a permanent endowment and the latter on an annual expenditure basis. The Cleveland directors realized that much health education at the present time is ineffective because of lack of funds to carry on a campaign long enough to do any good. Health education must be a permanent consistent program. The action taken by the Cleveland Academy of Medicine may well be a goal for other similar organizations.

March Placements

Black Hawk County Medical Society, Waterloo. March 3.
Chest Clinic—
The Recognition of Early Tuberculosis—John H. Peck, M.D., Des Moines.
The Thyroid Heart—C. B. Luginbuhl, M.D., Des Moines.
Problem of Coronary Disease—Walter L. Bierring, M.D., Des Moines.

Whiting Women's Club, Whiting. March 11.
Living At One's Best—Daniel J. Glomset, M.D., Des Moines.

Franklin County Medical Society, Hampton. March 12.
Medical Aspects of Hyperthyroidism—J. L. Kestel, M.D., Waterloo.
Surgical Management of Hyperthyroidism—T. F. Thornton, M.D., Waterloo.

Parent-Teachers Association, Diagonal. March 17.
Summer Round-Up—A. A. Johnson, M.D., Council Bluffs.

Boone County Medical Society, Boone. March 19.
Chest Clinic—
Some Problems in Tuberculosis—John H. Peck, M.D., Des Moines.
Hypertensive Heart Disease—Daniel J. Glomset, M.D., Des Moines.
Problem of Coronary Disease—Walter L. Bierring, M.D., Des Moines.

Calhoun County Medical Society, Rockwell City. March 19.
Office Gynecology—
The Patient; Gonorrhea; Sterility—H. E. Kleinberg, M.D., Des Moines.
Technic of Diagnosis and Treatment—W. F. Harriman, M.D., Sioux City.

Federated Women's Clubs, Des Moines. March 31.
Mental Hygiene—Andrew H. Woods, Director Psychopathic Hospital, Iowa City.

They Say---

Everyone appreciates a little encouragement once in a while and the Bureau takes real pleasure in recording these kind words of approval of our present and past activities:

Lay Meetings

During the month of October, 1930, the Iowa State Medical Society through its Bureau, furnished speakers for the District meetings of the Iowa Federation of Women's Clubs. This service was greatly appreciated by the officers of the Federation, the District Directors who had the programs in charge, by the Division of Public Health and by every club woman in the state. The speakers brought to these conventions interesting facts and figures concerning public health matters, presented community and individual health problems, and helped to make the programs educational and outstanding.

Mrs. M. Nelson Voldeng,
Chairman, Division of Public Health, Iowa Federation of Women's Clubs.

County Medical Society Meeting

The program arranged by the Speakers Bureau for the recent meeting of the Henry County Society, at Mount Pleasant, was well formulated and exceedingly well presented. The full program was much enjoyed by the physicians present from the counties of Washington, Jefferson, Henry and Des Moines.

C. A. Boice, M.D., Councilor.

Clinic

Everywhere I have heard our men express sincere approval and appreciation of the program provided by our visitors. Unquestionably the meeting was the most worth while of any we have ever had.

Leslie K. Fenlon, M.D., Secretary,
Clinton County Medical Society.

Postgraduate Work

I enjoyed the course to the fullest extent possible, ready to start the next.

Dell T. Grothaus, M.D., Delta.

Have driven 106 miles every meeting and feel that on no night has my time been wasted.

L. D. James, M.D., Fairfield, Iowa.

Medical Economics Committee Proposes Group Malpractice Protection

The Medical Economics Committee of the Iowa State Medical Society is making a recommendation to the House of Delegates on a matter which is of such far-reaching and vital importance that the following extract from the report of that committee is printed here for the information of the members of the society. The Committee on Constitution and By-Laws, as well as several county medical societies, has also discussed and approved this plan; and it is the hope of the Medical Economics Committee that serious consideration and affirmative action may be had upon this proposal at the coming meeting of the House of Delegates.

"Since there seems to be a growing sentiment as to the necessity of increasing the dues of the Iowa State Medical Society to make them more in line with the dues of surrounding states and to supply the funds to continue the present constructive program of the society, your Committee on Medical Economics has taken the preliminary steps to work out a proposal which it herewith presents, to the end that the society may increase its income to $10.00 per member and yet make an annual saving to each member in his expenses for dues and malpractice insurance.

"Such results could be accomplished through the purchase of a group malpractice insurance policy by the members of the state society at an approximate saving of thirty per cent per year. At present it is estimated that at least three-fourths of the members of the Iowa State Medical Society carry malpractice insurance at a general cost of $21.00 per year. If the society were to enter into an agreement with one of the insurance companies which write group malpractice insurance, arrangements could be made which would reduce the actual cost to about $15.00 per member. It is the unanimous opinion of the committee that this should be done. If this action were coupled with an increase of dues from $7.50 to $10.00 the total which each member would pay for both malpractice protection and state society dues would be $25.00. At present most of the members are paying $21.00 for their insurance and $7.50 for state society dues, which makes a total of $28.50. The plan proposed would reduce this total cost of $28.50 to $25.00 and still increase the income of the society. An additional important advantage of such a plan is that the insurance company would enter into an agreement with the state society that no cases would be settled out of court without the consent of the defendant physician and the state society.

"The committee therefore recommends to the House of Delegates the adoption of the following resolution:

"'*Resolved* that the House of Delegates of the Iowa State Medical Society recommend to the Trustees for favorable consideration the purchase of group malpractice insurance for the members of the Iowa State Medical Society at a net cost of not to exceed $15.00 per member and that the premium upon such insurance shall be paid by the members simultaneously with the payment of their dues.'

"It should be made clear, however, that the above resolution should be adopted only in connection with two other actions by the House, both of which involve amendment of the By-Laws. The adoption of the amendment to Chapter I, Section 1 of the By-Laws offered by the Committee on Constitution and By-Laws which increases the assessment from $7.50 per capita to $10.00 per capita, is necessarily an integral part of the plan and the committee would urge that the proposed resolution be adopted only after the amendment increasing the dues is adopted by the House of Delegates.

"The committee would further urge that if the amendment above mentioned and the proposed resolutions are adopted, then the By-Laws of the state medical society should be amended by striking out entirely those sections providing for medico-legal protection.

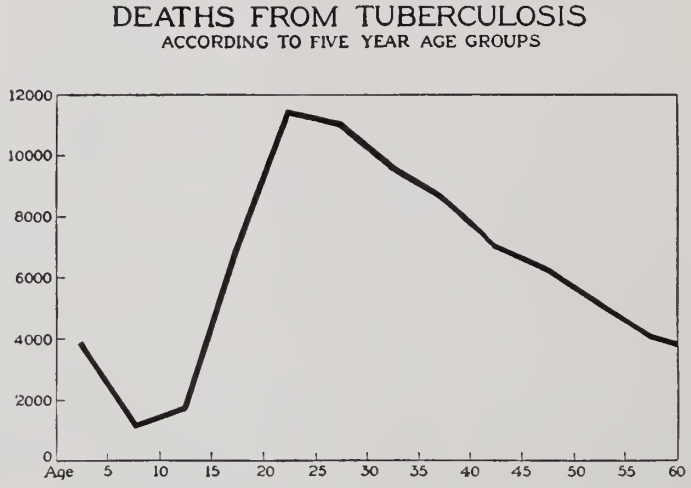
"It is also suggested that if this general plan is adopted, some provision should be made for permitting those members who do not desire to purchase malpractice insurance to pay only the state dues."

The Early Diagnosis Campaign

In April, voluntary health agencies throughout the country will conduct an "Early Diagnosis Campaign" under the leadership of the National Tuberculosis Association. This is purely an educational movement for the purpose of trying to get people to have medical examinations to prevent the major diseases, such as tuberculosis and heart disease, or to discover their beginnings in time to effect a cure.

Among the slogans of the campaign are "Go to Your Doctor," "Let Your Doctor Decide," "The Early Diagnosis Catches the Germ," "An Hour of Prevention Beats a Year of Cure," "Early Discovery, Early Recovery."

The campaign will be promoted throughout Iowa by the Iowa Tuberculosis Association and local health agencies, with the cooperation of the state and county medical associations, the State Department of Health and other organizations interested in public health. The cost will be defrayed by Christmas seal funds.



This graph shows the actual number of deaths from tuberculosis by age groups (U. S. Census, 1927). Notice that the period of childhood is apparently not a dangerous age but that in youth and early adulthood the toll mounts rapidly.

Educational methods comprise the use of posters, car cards, window displays, billboards, moving pictures, speeches, newspaper publicity, distribution of literature, etc.

Two years ago the campaign was concerned chiefly with adult health; and last year with the beginnings of disease in childhood. This year the emphasis will be on the teen ages and the twenties. These ages, especially among girls are particularly susceptible to tuberculosis. While the general death rate from this disease has declined fifty per cent, the rate among young women has remained almost stationary for the past few years.

SOCIETY PROCEEDINGS

Appanoose County

Friday, February 27, at St. Joseph Hospital in Centerville, the Appanoose County Medical Society met for the first of a series of four special medical meetings. The program was furnished by Joseph Brown, M.D., of Des Moines, who spoke on The Whys and Wherefores of Menstruation, and H. C. Hesseltine, M.D., of Iowa City, who dealt with the subject, Complications Met in Obstetrical Cases.

Cerro Gordo County

The Cerro Gordo County Medical Society held its regular meeting Tuesday, March 24, at Mercy Hospital in Mason City. After a short business meeting the following program was presented by members of the Mercy Hospital staff: Polyposis of Colon and Report of a Case, B. Raymond Weston, M.D., discussion by Madelene Donnelly; Presentation of a Heart Case, T. A. Burke, M.D., and Fractures of the Elbow and presentation of case, C. B. Tice, M.D.

T. E. Davidson, M.D., Secretary.

Fremont County Annual Meeting

Dr. L. A. Baldwin, of Riverton, was elected to head the Fremont County Medical Society during 1931, at a meeting of that organization held at Sidney, Friday, February 20. Other officers are: Dr. Harold Cole, of Thurman, vice president; Dr. A. E. Wanamaker, of Hamburg, secretary and treasurer; Dr. J. M. Hughes, of Hamburg, delegate and Dr. A. Roy Wanamaker, of Hamburg, alternate.

Greene County

The regular monthly meeting of the Greene County Medical Society was held Thursday, March 12, at the Hotel Lincoln in Jefferson. A symposium on Focal

Infections was presented by John R. Black, M.D., and J. M. Jackson, M.D., both of Jefferson, and Leonard A. West, M.D., of Des Moines.

Grundy County Annual Meeting

Thursday, March 5, the annual meeting of the Grundy County Medical Society was held at the court house in Grundy Center. Dr. E. A. Crouse, of Grundy Center, was elected president; Dr. E. R. Gould, of Conrad, was named vice president; and Dr. C. H. Bartruff, of Reinbeck, was elected secretary and treasurer.

Henry County

The Henry County Medical Society held its regular meeting, Friday, March 13, at the Harlan Hotel in Mt. Pleasant. The members met for a six-thirty dinner, after which a paper on Head Injuries was presented by J. R. McKirahan, M.D., of Wayland.

Johnson County

The regular meeting of the Johnson County Medical Society was held Wednesday, March 4, in Iowa City, with the following program: Migraine without Headache, C. W. Rutherford, M.D., discussion opened by C. Van Epps, M.D., and Intravenous Urography, Harry P. Lee, M.D., discussion opened by W. H. Gibbon, M.D.

Kossuth County

Charles W. Mayo, M.D., of the Mayo Clinic at Rochester, was the speaker of the evening at a dinner meeting of the Kossuth County Medical Society held in Algona, Friday, March 20. Dr. Mayo spoke on Preoperative Preparation and Its Effect on Postoperative Results.

Lee County

The semi-annual meeting of the Lee County Medical Society will be held in Keokuk, Thursday, May 7, and the program will be furnished by faculty members of the Washington University School of Medicine at St. Louis, Missouri. The all day session will begin at ten o'clock in the morning with a paper on General Consideration of Our Present Conception of Sinus Disease by M. F. Arbuckle, M.D., professor of eye, ear, nose and throat. At eleven o'clock, Alexis F. Hartman, M.D., associate professor of pediatrics, will present The Application of Certain Recently Acquired Physiological and Biochemical Observations to Pediatric Problems.

The noon luncheon will be served at the Keokuk Club, after which Otto N. Schwarz, M.D., professor of obstetrics and gynecology will read a paper on Some Observations in the Practice of Obstetrics. The program will be closed with an address on Neurological Surgery by Ernest Sachs, M.D., professor of neurology.

Linn County

Two members of the Nebraska University College of Medicine faculty, spoke before the Linn County Medical Society at its regular meeting held in Cedar Rapids, Thursday, March 12. John B. Potts, M.D., associate professor of otolaryngology, and A. D. Dunn, M.D., professor of experimental medicine, presented Chronic Hyperplastic Maxillary Sinusitis and Its Relation to Bronchial Asthma and Focal Infections.

Marshall County

Tuesday, March 3, members of the Marshall County Medical Society met to honor Marshall County's veteran practitioners, Dr. Dorr Graves of Gilman and Drs. W. F. David and G. A. Mershon, of Marshalltown. After a six-thirty dinner served at the Hotel Tallcorn, the following program was presented: Early Practice of Medicine, A. D. Woods, M.D., State Center; Early Practice of Surgery, J. J. Noonan, M.D., Marshalltown; Tribute to the Early Practitioners, Ralph E. Keyser, M.D., Marshalltown.

Monona County Annual Meeting

Thursday, February 5, the members of the Monona County Medical Society met in Ute for the annual election of officers. Following the dinner at six-thirty, our guest of the evening, Dr. William Jepson, of Sioux City, discussed various legislative matters. The election of officers resulted in Dr. Paul Ingham, of Mapleton, being named president; Dr. F. J. Stodden, of Mapleton, vice president; Dr. E. J. Liska, of Ute, secretary and treasurer; Dr. Emil Junger, of Soldier, delegate and Dr. M. O. Stauch, of Whiting, alternate.

Edward J. Liska, M.D., Secretary.

Polk County

The regular meeting of the Des Moines Academy of Medicine and Polk County Medical Society was held at Hotel Fort Des Moines, Tuesday evening, March 31, 1931. The meeting was opened with a clinical case report of Keratosis by Erwin Schenk, M.D. The principal paper of the evening was presented by Frank L. Williams, M.D., on the subject The Relation of State Medicine to Civil Practice. Thomas A. Burcham, M.D., presented A Report of Medical Legislative Activities.

Scott County

Philip H. Kreuscher, M.D., clinical professor of orthopedic surgery, Loyola University School of Medicine, furnished the program for the Scott County Medical Society at its regular monthly meeting held in Davenport, Tuesday, March 3. Dr. Kreuscher's subject was Injuries About the Knee.

Washington County

The regular meeting of the Washington County Medical Society was held Tuesday, March 3, and two members of the State University of Iowa College of Medicine staff, presented the program. G. H. Hansmann, M.D., gave an illustrated address on the Practice of Laboratory Medicine, and J. E. Milgram. M.D., spoke on Diagnosis of Bone Tuberculosis.

Webster County

The Webster County Medical Society held its March meeting the evening of March 10th, at Mercy Hospital in Fort Dodge. The president introduced the speaker of the evening, Norman F. Miller, M.D., of the Department of Obstetrics and Gynecology at the State University. Dr. Miller gave a most clear and interesting talk on Pelvic Infections (Gonorrheal) which was well illustrated by slides. This was one of the best discussions ever presented to the Society. Following the paper there was a general discussion which was entered into by members of the society and its guests. This meeting was well attended, there being fourteen doctors from outside the county present.

John C. Shrader, M.D., Secretary.

AUXILIARY NEWS

The Woman's Auxiliary to the Washington County Medical Society has recently been organized with the following officers: Mrs. C. W. McLaughlin of Washington, president and Mrs. E. E. Blythe of Riverside, secretary.

Mrs. E. L. Bower, of Guthrie Center, has received word that she was appointed a member of the National Hygeia Conference at Detroit. Mrs. Bower is the president of our State Auxiliary.

Mrs. W. W. Southwick, who was the secretary of the Marshall County Woman's Auxiliary, died at her home, March 15th.

INTERESTING NEWS

In Brief

Fifty-four of the world's leading specialists in the study and treatment of cancer presented a symposium of honor, an "homage book," to Prof. James Ewing of Cornell University at a recent testimonial dinner. The tribute was in the form of a book entitled "Cancer," a bound edition of a recent issue of the Annals of Surgery, containing original articles by fifty-four of the outstanding authorities on cancer in this and foreign countries. Dr. Ewing is a professor of pathology in Cornell Medical School and author of "Neoplastic Diseases," the most outstanding English text covering this field.

The Iowa division of the United States Veterans Bureau reports that during the year of 1930 over two million dollars were spent for the relief of Iowans who served in the World War. This includes disability compensation for injuries received in actual service, disability allowance for disabilities acquired since the war, hospitalization in government hospitals and medical treatment outside of government hospitals.

Strange as it may seem to medical practitioners, a strong protest was registered by Iowa farmers against the bill proposed in the State Legislature demanding tuberculin testing of dairy cattle. Such a protest would seem to indicate that the Iowa farmer places a greater value upon his cattle than he does upon the health conditions of his community and State.

A bill introduced into the Iowa Legislature by Representative W. E. Long (physician) of Mason City, provides for quarantine of all persons infected with a venereal disease. It also provides that any physician failing to report a case of venereal disease shall have his license revoked for one year.

A three volume record of the transactions of the Keokuk Medical Society, which was organized in 1850 and disbanded in 1910, will be presented to the State Medical Library for safe keeping. These volumes form a very important part of the official history of medicine in this State.

A clinic has been formed in the Church of the Holy Trinity, Brooklyn, by doctors and ministers for the treatment of nervous disorders, border-line mental cases, and patients with injurious habits. It is said that both prayer and medicine will be relied upon for cures.

The Federal Office of Education has issued a decision that authorities in Land Grant Colleges are responsible for student health. Laxity in housing and feeding of students and laxity in enforcing all safety regulations are definitely chargeable to officials in care of students.

It seems assured that the new Government General Hospital, involving an expenditure of $1,000,000 will be placed in Iowa. It is reported that General Frank T. Hines, Director of the Veterans Bureau, has recommended its location at Knoxville.

A recent report from the University Psychopathic Hospital released by Dr. A. H. Woods, director, indicates that a total of 1,315 persons from various sections of Iowa received treatment for mental diseases in the institution during the last fiscal year.

At a recent meeting of the Iowa Tuberculosis Association, Dr. John H. Peck, of Des Moines, was again elected to presidency. A second physician elected to office was Dr. W. L. Bierring, of Des Moines, honorary vice president.

Announcement has been made that a new Children's Ward to be known as the Pine Knolls Sanatorium would be added to the Scott County Public Hospital this year for the treatment of tuberculosis.

The Rev. Alphonse Schwittala, S.J., dean of the Medical School of St. Louis university, was a guest at Mount Mercy Junior College at Cedar Rapids, last month.

PERSONAL MENTION

Dr. **Edwin R. Anderson**, formerly of Tulsa, Oklahoma, has located in Story City, and has rented the office of the late Dr. Hans T. Haerem. He was graduated in 1926 from the Minnesota University College of Medicine, and was an interne at the city hospital in Detroit, Michigan.

Dr. **Thomas R. Gittins**, of Sioux City, was elected president of the University of Iowa Alumni, at the annual banquet of that organization held in Sioux City, Monday, March 7.

Dr. **C. L. Chambers**, of Des Moines, addressed the local Kiwanis Club, Wednesday noon, March 18, on "How We Hear and How We See."

Dr. **Easton H. Lum** has announced that he will close his office in New London for three months beginning April first, when he is leaving for New York where he will take a post graduate course in general medicine.

Dr. **G. A. Bemis**, of Garner, recently received official notification that he has been named as a member of Governor Dan Turner's staff with the rank of Lieutenant Colonel.

Drs. **Walter E. Anthony** and **L. A. Taylor**, both of Ottumwa, have delivered fifteen-minute broadcasts over WIAS, as a part of the regular weekly Y. M. C. A. physical education. Dr. Anthony spoke on "Indigestion," and Dr. Taylor on "Nose and Throat Diseases."

Dr. **Arthur E. Jensen**, formerly of Omaha, has recently purchased the equipment and taken over the office of Dr. E. L. Watson at Bode. He is a graduate of the Medical School of the University of Nebraska, and has just completed his interneship at the Lutheran Hospital in Omaha.

Dr. **Granville Ryan**, of Des Moines, addressed members of the Newton Rotary Club, at their regular weekly meeting, Tuesday noon, February 17. His subject was "Preventive Medicine."

Dr. **Herbert W. Rathe**, of Waverly, has accepted an appointment to the staff of the Department of Internal Medicine of the State University of Iowa College of Medicine. Dr. Rathe will leave Waverly to begin his new work July 1.

Dr. **S. E. Sibley**, of Sioux City, spoke to the Morningside College Pre-Medic Club, Thursday evening, March 19. The subject of his lecture was "Young Surgeons."

Dr. **Wayland Maloy**, of Bedford, has announced his association in Council Bluffs, with Dr. S. D. Maiden, a specialist of that city, for the past ten years. They will treat eye, ear, nose and throat disorders exclusively.

Dr. and Mrs. **Martin J. Ryan** are returning to Sioux City after a year's absence, during which time Dr. Ryan was studying in Chicago. He will resume his practice in Sioux City.

Dr. **Roy F. Bellaire**, of Sioux City, was re-elected president of the Woodbury County Health Unit at a meeting held Thursday, March 19.

DEATH NOTICES

Dilts, John Joseph, of Salem, died March 2, at the age of sixty-seven as the result of ill health for the past year. He was graduated in 1888 from the College of Physicians and Surgeons at Keokuk. At the time of his death he was a member of the Henry County Medical Society.

Powell, Charles Winburn, of Cedar Rapids, died February 20, at the age of fifty-nine after an illness of two years. He was graduated in 1904 from the Keokuk Medical College, and had long been a member of the Iowa State Medical Society.

Edith Hendrickson Eiker, R.N., wife of Dr. B. L. Eiker, of Leon, died at her home in Leon, Iowa, February 22, 1931, from coronary sclerosis.

A MOVING PICTURE FEATURING DIETS FOR CHILDREN

The Bureau of Home Economics of the United States Department of Agriculture has prepared a two reel moving picture for popular use which emphasizes the necessity of proper foods for the growing child. Factors in the control of food requirements are illustrated by the comparative viewing of normally and underdeveloped children and by showing the results produced by experiments on rats by feeding a balanced ration as contrasted with those which have been improperly fed. The conclusions drawn from the film are that defects resulting from poor diet can be prevented by a balanced diet and that well nourished children are happy, keen, energetic, and have healthy appetites and sturdy bodies. Physicians desiring to use this film may borrow same from the Office of Motion Pictures, United States Department of Agriculture, Washington, D. C., without charge except for transportation of the film to and from Washington.

FREE! A MENTAL HYGIENE FIVE FOOT SHELF

A limited number of back issues of *Mental Hygiene*, quarterly journal of the National Committee for Mental Hygiene, beginning with Volume I, 1917, is available, without charge, to libraries, medical schools, hospitals, clinics and other eleemosynary and educational institutions. We cannot, like the publishers of the Harvard Classics, promise readers of *Mental Hygiene* a liberal education, but we can send them, if they wish, a five foot shelf, approximately, of periodical publications that will add considerably to their store of knowledge in a new field, as there are copies for nearly every number of the magazine previous to 1930. The only charge will be for packing and shipping. As this offer will stand for but a few weeks, applications should be made at once to H. Edmund Bullis, Executive Officer, The National Committee for Mental Hygiene, 450 Seventh Avenue, New York City. Orders should be sent for as complete sets as possible.

HISTORY OF MEDICINE IN IOWA

Edited by the Historical Committee

DR. WILLIAM JEPSON, Sioux City
DR. ARTHUR D. WOODS, State Center
DR. FRANK M. FULLER, Keokuk
DR. WALTER L. BIERRING, Des Moines
DR. NORMAN F. MILLER, Iowa City

Charles Edward Ruth, M. D.—The Author

While bibliography may not always be regarded as a criterion of knowledge, a careful record of publications permits an estimate of the character of the work performed. In the appended list of seventy-five articles published by Dr. Charles E. Ruth recording his medical and surgical experiences in Iowa for a period of forty-seven years, 1883-1930, we gain a new conception of the remarkable versatility, scientific spirit, and surgical leadership of our departed colleague.

This illustrates, also, the wide range of his surgical activities, much of which is distinctly original in nature. The report of a gastro-enterostomy for carcinoma of the pylorus in 1892, probably recorded the first instance of this type of operation in Iowa. He was evidently one of the first in Iowa to use the Murphy Button for intestinal anastomosis. His contributions on the surgical treatment of appendicitis were also among the first reported in this state. A considerable number of articles indicate his active interest in brain surgery as applied to fractures of the skull, brain abscess, penetrating gunshot wounds, and hypopysis tumors. Plastic surgery, particularly of the face, is the subject of several of his publications. In 1901, he published an interesting article on cocaine spinal anesthesia, by lumbar puncture.

During 1911 and 1912, a number of interesting articles appeared describing his experience as a practitioner in Porto Rico, reporting the observation of the mongoose as a carrier of bubonic plague.

The frequent reports of anatomic anomalies as observed in surgical operations were the results of his long service as a teacher of anatomy. In the Journal of the American Medical Association of August 26, 1899, appeared the first article on the Anatomical Treatment of Fractures of the Femoral Neck, with report of its use in 17 cases. This was followed by many articles on the same subject, the last publication appearing in the J. A. M. A. of January 18, 1930. This method became known as the Maxwell-Ruth plan, and the continued improvement with extensive application by Doctor Ruth is one of the outstanding additions to the surgical knowledge of his time.

That this method of treatment was included in two textbooks, viz., Scudder's Treatment of Fractures, 1922, and Babcock's Surgery, 1928, indicates the leadership attained by Doctor Ruth in this particular field of surgery.

The list of publications by Doctor Ruth has been carefully collected by Dr. Jeanette Dean-Throckmorton, medical librarian, and constitutes a fitting testimonial of his authorship, and valuable additions to surgical literature. W.L.B.

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Jr. Iowa St. Med. Soc., Aug., 1916, Vol. 6, 343-350.

64. Gunshot Wounds of the Brain.
Med. Herald, St. Joseph, 1918, n.s. Vol. 37, 106-109.

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67. Detachment of Adherent Placenta and Delivery in Abortion.
Am. Jr. Obst. and Gyn., St. Louis, April, 1920-21, Vol. 1, 700; also Illinois Med. Jr., Chicago, 1921, Vol. 40, 113-116; also Tr. Am. Assn. Obst. and Gyn., St. Louis, 1920, 1921, Vol. 33, 289-294.

68. Demonstration in Use of Thomas Splint and Balkan Frame.
Jr. Iowa Med. Soc., April, 1921, Vol. 11, 121.

69. Fractures of Femoral Neck and Trochanters, a Rational Treatment.
J. A.M.A., Dec. 3, 1921, Vol. 77, 1811.

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71. Maxwell-Ruth Method for Treatment of Intracapsular Fracture of the Femur.
Scudder, Treatment of Fractures, p.405, 1922.

72. Oration in Surgery.
Jr. Iowa Med. Soc., April, 1923, Vol. 13, 130-135.

73. Fractures of the Lower Extremities.
Jr. Iowa Med. Soc., April, 1925, Vol. 15, 186-192.

74. Maxwell-Ruth Method of Treatment of Intracapsular Fracture of the Femur.
Babcock's Surgery, p.307, 1928.

75. Fracture of the Hip.
J. A.M.A., Jan. 18, 1930, Vol. 94, 169; also Section on Surgery, J. A.M.A., 1929, p.229.

HIPPOCRATES ON PROGNOSIS

The treatise **On the Prognostics** will always be famous for the Hippocratic description of the signs of approaching death which we still call **facies Hippocratica**: nose sharp, eyes hollow, temples sunken, ears cold and contracted with their lobes turned outwards, skin tense and parched, face discolored, eyelids livid, mouth open, lips loose and blanched. There are valuable discussions of pain, fever, headache, pus and urine. The remarkable observation—"A swelling in the hypochondrium that is hard and painful is very bad, provided it occupies the whole hypochondrium, but if it be on either side, it is less dangerous when on the left"—is interesting as the first reference to appendicitis.

THE JOURNAL BOOK SHELF

BOOKS RECEIVED

*CHRONIC ARTHRITIS AND RHEUMATOID AFFECTIONS—With Recovery Record—By Bernard Langdon Wyatt, M.D., F.A.C.P.—With the collaboration of Louis I. Dublin, Ph.D. and Foreword by Dr. J. Van Breemen. William Wood and Company, New York, 1930. Price, $2.50.

*CLINICAL ALLERGY: Particularly Asthma and Hay Fever: Mechanism and Treatment.—By Brancis M. Rackemann, M.D., Instructor in Medicine, Harvard Medical School.—The MacMillan Company, New York, 1930.—Price, $10.50.

*CLIO MEDICA—A Series of Primers on the History of Medicine. 1—THE BEGINNINGS—EGYPT AND ASSYRIA.—By Warren R. Dawson, F.R.S.E.—II MEDICINE IN THE BRITISH ISLES.—By Sir D'Arcy Power, K.B.E., F.R.C.S.—III ANATOMY—By George W. Corner, M.D. Edited by E. B. Krumbhaar, M.D.—Published by Paul B. Hoeber, Inc., New York, 1930.—Price, $1.50 for each volume.

*HOW IT HAPPENED—By A. G. Bettman, M.D., F.A.C.S.—F. A. Davis Company, Philadelphia, 1931.—Price, $1.00.

*MEDICAL CLINICS OF NORTH AMERICA—(New York Number—September, 1930.)—Vol. XIV, No. 2.—W. B. Saunders Company, Philadelphia and London, 1930. (Issued serially, one number every other month.) Price, paper $12.00; cloth, $16.00.

*MEDICAL CLINICS OF NORTH AMERICA—(Philadelphia Number—January, 1931)—Vol. XIV, No. 4.—W. B. Saunders Company, Philadelphia and London, 1930. (Issued serially, one number every other month.) Price, paper $12.00; cloth, $16.00.

*MODERN METHODS OF TREATMENT—Fourth Edition—By Logan Clendening, M.D., Professor of Clinical Medicine, University of Kansas—With Chapter on Special Subjects by H. C. Andersson, M.D.; J. B. Cowherd, M.D.; H. P. Kuhn, M.D.; Carl O. Rickter, M.D.; F. C. Neff, M.D.; E. H. Skinner, M.D.; and E. R. DeWeese, M.D.—819 pages with 95 illustrations.—C. V. Mosby Company, St. Louis, 1931.—Price, $10.00.

*PRACTICAL RADIATION THERAPY—By Ira I. Kaplan, M.D., Director, Division of Cancer, Department of Hospitals, New York City—with a special chapter on APPLIED X-RAY PHYSICS—By Carl B. Braestrup, P.E., Radiation Physicist, Division of Cancer, Dept, of Hospitals, New York City—354 pages with 227 illustrations.—W. B. Saunders Company, Philadelphia and London, 1931.—Price, cloth, $6.00.

*SURGICAL CLINICS OF NORTH AMERICA—(Philadelphia Number, December, 1930.)—Vol. X, No. 6. INDEX NUMBER. 316 pages with 95 illustrations. W. B. Saunders Company, Philadelphia and London, 1930.—Price, per clinic year (February, 1930 to December, 1930) paper, $12.00; cloth, $16.00.

Review appears in this issue.

BOOK REVIEWS

CHRONIC ARTHRITIS AND RHEUMATOID AFFECTIONS

With Recovery Record. By Bernard Langdon Wyatt, M.D., F.A.C.P. With the collaboration of Louis I. Dublin, Ph.D. and Foreword by Dr. J. Van Breemen. William Wood and Company, New York, 1930. Price. $2.50.

It is stated that chronic arthritis and rheumatic conditions rank as the leading causes of illness in the United States. According to a sickness survey of the Metropolitan Life Insurance Company, as reported by Dr. Dublin in the introductory chapter of this book, rheumatism accounts for nearly 9 per cent of all cases of illness, while tuberculosis is responsible for one-half of this morbidity, organic heart disease and cerebral hemorrhage only two-fifths, and cancer one-tenth as many cases of illness. With this background it would seem timely that a comprehensive treatise covering a full discussion of rheumatism should be written by one who, because of his favorable position, is highly competent for such a discussion.

The author presents first, a detailed statistical study of the incidence of rheumatic diseases by Dr. Louis I. Dublin of the Metropolitan Life Insurance Company. This chapter is followed by ones dealing with the types and causes of chronic arthritis, the early diagnosis of the disease, and in the six succeeding chapters discusses intimately the various forms of therapy. His chapter on diet gives actual menus, while his discussion of drugs, vaccines, hydrotherapy, radiant heat, joint exercise, massage, etc., are presented with accurate instruction for their respective use.

The author has prepared his book for use by both the physician and the patient, since he believes that in this disease an intelligent understanding by the patient may go far towards securing his intelligent cooperation. The volume appears very useful, indeed, for the purpose intended and one entirely safe, since it contains no suggestions that home medication or self-treatment can be substituted for competent medical management.

CLINICAL ALLERGY

Particularly Asthma and Hay Fever; Mechanism and Treatment. By Francis M. Rackemann, M.D., Instructor in Medicine, Harvard Medical School. The Macmillan Company, New York, 1930. Price, $10.50.

Under the editorial advisorship of George R. Minot, the Macmillan publishers are presenting to the profession monographs covering special fields of medical practice. In this volume, prepared by a recognized authority, the field of Clinical Allergy is fully and admirably covered.

Part I of the volume discusses the phenomenon of the hypersensitiveness, treating in turn the subjects of: the history, the basis of the chemistry involved, the immunology of hypersensitiveness, anti-anaphylaxis, and diagnosis of hypersensitiveness and methods of desensitization.

Part II discusses the clinical characteristics of allergy discussing the specific reactions of man to horse serum and various pollens. Continuing in this section is a discussion of asthma upon a pathological and etiological basis with full discussion relative to treatment and the relation of this condition to the less perfectly understood allergic conditions of urticaria, erythema multiforme and angioneurotic edema, eczema and migraine.

At the close of each chapter a selected bibliography is listed which will give the reader access to the

more significant modern literature upon the subject. When one considers the tremendous mass of literature which has been developed, especially during the past few years relative to these most frequent and little understood conditions, one can appreciate the difficulties encountered in the preparation of this book. We heartily concur with the opinion expressed by Hans Zinsser—author of the foreword in this volume—"The time has come at which a monograph such as the one Dr. Rackemann has written should be of the utmost importance in bringing the immunological point of view to the clinician and the clinical point of view to the immunologist. In this task we think the author has been eminently successful."

HOW IT HAPPENED

By A. G. Bettman, M.D., F.A.C.S. F. A. Davis Company, Philadelphia, 1930. Price, $1.00.

This satirical anthology has been prepared presumably for the entertainment of the laity with the thought that medical truths so presented would be more indelibly impressed upon the minds of the readers. It is suggested that the volume could be favorably employed in the doctor's waiting room.

This reviewer found little of interest, however, in the perusal of the book, and because of the style employed would have limited from choice his reading to one or at most two of the sketches. The style is monotonous and the stories entirely childish. The volume may have some value in teaching health principles to small children but would, of course, require careful selection since many of the stories deal with problems far too advanced for the child's mind.

The volume has been reviewed by several non-professional persons, and without exception their reaction has been that the book contained little of interest.

MEDICAL CLINICS OF NORTH AMERICA

(Philadelphia Number, January, 1931), Volume xiv, No. 4, 240 pages with 47 illustrations. W. B. Saunders Company, Philadelphia and London, 1931. Price, paper, $12.00; cloth, $16.00 net.

This volume prepared by clinicians of Philadelphia presents the usual number of well-written and highly informative articles. The four articles of outstanding interest to the reviewer deal with subjects of everyday clinical interest.

The first is contributed by Drs. David Riesman and Harold S. Davidson and reviews psittacosis from a clinical standpoint, illustrating their review by a case report. The subject of duodenitis is discussed by Dr. Miller with a presentation of twenty-six cases so diagnosed. Dr. Rehfuss, in his usual interesting fashion, discusses various intestinal conditions under the heading of "The Problem of the Colon Bacillus." Dr. Thomas Fitz-Hugh, Jr., presents the subject of liver therapy with discussions from the chemical and hematological aspects and the signs indicating the degree of clinical cure to be expected with this form of therapy. Of the newer and somewhat experimental conditions, that presented by Dr. Hartmann dealing with the lead therapy in myelogenous leukemia is perhaps most outstanding.

MODERN METHODS OF TREATMENT

Fourth edition. By Logan Clendening, M.D., Professor of Clinical Medicine, University of Kansas. With Chapter on Special Subjects by H. C. Anderson, M.D.; J. B. Cowherd, M.D.; H. P. Kuhn, M.D.; Carl O. Rickter, M.D.; F. C. Neff, M.D.; E. H. Skinner, M.D.; and E. R. DeWeese, M.D. 819 pages with 95 illustrations. C. V. Mosby Company, St. Louis, 1931. Price, $10.00.

This volume, now in its fourth edition, has been planned to furnish an outline of all methods of treatment used in internal medicine. It is the author's belief that the ordinary volume discussing therapy is entirely too limited in its scope, since in many of them, medical therapy alone is discussed. In the present volume drugs, hydrotherapy, diet, blood transfusions, exercise, climate, etc., are all minutely described. The author has attained his aim in this volume which he states as, "My aim has been to describe each method of procedure so clearly and minutely that a person who has never seen it performed could do it from the description."

The first part of the book describes procedures, while the second part gives indications for their application. The volume is written in paragraphic style which together with a comprehensive index makes the book most effective as a reference volume.

It is my impression that this book is more useful as a reference volume than as a textbook. Certainly the practicing physician will find it entirely helpful.

THE SURGICAL CLINICS OF NORTH AMERICA

(Philadelphia Number, December, 1930) Vol. 10, No. 6. Index Number. 316 pages with 95 illustrations. Per Clinic year (February, 1930 to December, 1930), paper, $12.00; cloth, $16.00. W. B. Saunders Company, 1930, Philadelphia and London.

The volume contains many interesting presentations. A clinical lecture on cancer of the rectum by Dr. John B. Deaver is very comprehensive. Drs. W. Wayne Babcock and Chevalier Jackson discuss the subject of "Diverticulosis of the Esophagus, one stage operation with esophagoscopic assistance." "Pathologic Fractures," by Drs. Eldredge L. Eliason and V. W. Murray Wright, is a very thorough discussion of the subject. This is presented both from personal experience and from work of others. The article is well illustrated and there are several tables dealing with various phases of the subject. Each condition which may cause pathologic fracture is discussed in a concise manner.

Dr. George P. Mulle calls attention in his article to the value of spleenectomy in primary pernicious anemia. F.W.F.

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FOREIGN BODIES IN THE AIR AND FOOD PASSAGES*

Report of Seventy-six Cases

T. R. GITTINS, M.D., Sioux City

The detailed report of even a small group of foreign body cases from any locality may bring out some points of interest. The subject matter of this paper is based upon the records of 76 cases in which foreign bodies were present in either the air or food passages. The records are those of patients handled in private practice by my associate, Dr. J. B. Naftzger, and myself. In 1925 we prepared a similar report of 43 cases. We have made it a practice to work together whenever possible on all foreign body cases, and feel that teamwork cannot be too highly recommended in this phase of nose and throat practice. Many situations present themselves in endoscopic work where it is practically impossible for one operator to do justice to the patient or himself because of the necessity for speed, stamina and attention to detail of mechanical and electrical devices. A quick selection of the proper forceps, a helpful suggestion at the right time or relief for the tired eyes or arms of the operator by the co-worker often spells success where failure seemed imminent.

Of the 76 cases considered, 32 dealt with exploration of the trachea and bronchi; 8 with the larynx: the remaining 36 with the esophagus. Those cases in which foreign bodies were removed from the pharynx or tonsils or from the larynx without endoscopic procedure are not included in this report.

To simplify the study of this group of cases, the statistics will be grouped in outline form:

TYPES AND NUMBERS OF FOREIGN BODIES

Foreign Bodies in Air Passages

Corn kernels	11
Peanut	6
Sand burr	5
Lima bean	1
Apple core (portion)	1
Almond	1
Prune pit	1
Watermelon seed	3
Brazil nut shell	1
Hazel nut	1
Meat	1
Eggshell	1
Celluloid	1
Tooth	1
Mucus (possibly small foreign bodies)	3
Nail	1
Straight pin	1
	40

Foreign Bodies in Esophagus

Nickel	4
Penny	4
Dollar	2
Safety pins	5
Straight pin	1
Piece of brass	1
Chicken bones	7
Iron washer	1
Prune pit	1
Cherry stone	1
Meat	1
Thumb tack	1
Button	3
Screw	1
Pork chop bone	1
Squab bone	1
Oyster shell	1
	36

Air Passages:

It is noted that the corn kernel appeared about twice as often as any other type of foreign body. The proportion of sand burrs would be higher, however, if we had included in the series the simple cases in which the burr was removed while the throat was being examined or cocainized. In only one case have we had to remove a sand burr from the trachea or bronchi. In our experience the sharp projections on the burr have almost always been embedded in the vocal cords or tissues above. Peanuts have been removed six times, usually in

* Presented before the Seventy-ninth Annual Session, Iowa State Medical Society, Marshalltown, May 14, 15, 16, 1930. Section on Ophthalmology, Otology, and Rhinolaryngology.

several pieces. In three instances we have considered mucus as a foreign body. In these three cases there was a typical history of foreign body inhalation and a typical clinical foreign body picture, yet on bronchoscopy no foreign body was found of sufficient size to be identified. However, after aspiration of the thick mucus with the suction catheter through the bronchoscope small particles of foreign matter were evident, and clinically the symptoms were relieved. In two cases, both babies, wherein eggshell and celluloid respectively were found as foreign bodies, the material was of sufficient size to lodge in the larynx and give very pronounced stridor. The eggshell baby had been treated as diphtheria for three or four days and large doses of antitoxin had been given.

Food Passages:

In this group coins held first place with ten, but chicken bones came close behind with seven. Two of the coins were silver dollars. A dollar was present in the esophagus of a young Indian for four weeks. He thought his throat symptoms were due to poor liquor and claimed no knowledge of the coin. All of the chicken bone cases have appeared since our last report three and one-half years ago. Four of these chicken bones were of the flat triangular type with sharp edges that so easily escape notice in salads or gravy. In one instance the entire vertebra of a chicken had been present in the upper esophagus of an adult for two weeks. A stomach tube and an esophagoscope had been passed into the stomach by another physician with a negative report as to the presence of a foreign body. A baby four weeks of age had a large screw in the upper portion of the esophagus which gave such severe respiratory symptoms that the infant was brought in as a diphtheria patient. A cherry stone was found at autopsy in an old lye stricture and it had probably been present for at least three months. No search had been made for it because the lye stricture was blamed for the difficulty in swallowing. The child died of starvation. A large rectangular piece of brass from a Ford car had been present in the esophagus of a child for eight months before an X-ray revealed its presence. Severe respiratory symptoms had developed subsequent to the marked difficulty in swallowing. Two open safety pins with the points up were removed from the upper portion of the esophagus in a baby four weeks old. In one instance a penny was lodged in a lye stricture and had resisted the efforts of a general practitioner to force it into the stomach, though he had worked diligently five different times in one week, each time with ether anesthesia. A prune pit lodged in an old typhoid stricture caused a complete obstruction in an adult.

LENGTH OF TIME FOREIGN BODIES WERE PRESENT IN PASSAGES: DELAY IN DIAGNOSIS

Air Passages

Corn kernels	11—	7 hrs. to 12 days
Peanut	6—	2 hrs. to 63 days
Sand burr	5—	6 hrs. to 12 hrs.
Lima bean	1—	1 day
Apple core	1—	6 hrs.
Almond	1—	14 days
Prune pit	1—	105 days
Watermelon seed	3—	3 days to 7 days
Brazil nut shell	1—	6 hrs.
Hazel nut	1—	3 days
Mucus	3—	1 day to 14 days
Beefsteak	1—	10 min.
Straight pin	1—	12 hrs.
Nail	1—	24 hrs.
Celluloid (larynx)	1—	8 hrs.
Tooth	1—	3 days
Eggshell (larynx)	1—	3 days
	40	

Esophagus

Screw	1—	3 days
Penny	4—	7 hrs. to 5 days
Piece of brass	1—	240 days
Dollar	2—	18 hrs. to 4 wks.
Nickel	4—	1 day to 9 days
Button	3—	60 days, 14 da. 4 da.
Straight pin	1—	7 hrs.
Iron washer	1—	3 days
Safety pin	5—	1 hr. 8 hrs. 10 hrs. 15 da.
Prune pit	1—	8 hrs.
Oyster shell	1—	3 days
Chicken bone	7—	1 day to 14 days
Squab bone	1—	3 days
Pork chop bone	1—	1 day
Thumb tacks	1—	10 hrs.
Meat	1—	6 hrs. (carcinoma)
Cherry stone	1—	6 wks.
	36	

Peanuts	9 weeks in 2 cases
Prune pit	15 weeks
Piece of brass	8 months
Button	2 months
Dollar	4 weeks

The above statistics indicate in a high percentage of cases either delayed or mistaken diagnosis. It is this delay in bringing a case for treatment that greatly increases the possibility of complications or fatalities. In the tracheal and bronchial group corn kernels were present from seven hours to twelve days; peanuts from a few hours to sixty-three days; a prune pit was in the trachea three months. In two instances a portion of peanut was removed from the bronchus of a child sixty-three days after ingestion. One of these little patients was five years of age and one twenty-two months. Both had gone through a long stormy chest course

with diagnoses of pneumonia, empyema and possible tuberculosis before they reported for foreign body search. Both of these patients came for examination of their own accord and not at the suggestion of a doctor.

In the esophageal group a button had been lodged for 60 days and a piece of brass for 240 days. Histories of these two cases bring out forcibly the point that diagnosis is often made only after a gradual elimination of other diseases, with the patient passing from one doctor to another. The child with the piece of brass in the esophagus had been treated for stomach trouble and had had the tonsils and adenoids removed because of difficulty in swallowing. Later respiratory symptoms developed and the child was treated for asthma and bronchitis. Finally after eight months, during which time examinations had been made by various doctors in three different states, an X-ray of the patient was taken and showed a large metallic foreign body in the esophagus. How many foreign body cases unrecognized as such go on to serious complications or death is a matter for speculation. A study of any group of case records leads one to believe that the number is probably great. In the cases in which there was delay or wrong diagnosis, it was often found that doctors had paid no attention to a definite foreign body history and in many instances had argued against such a possibility without making any examination. In some of our worst cases the patients appeared on advice of the laity and not of the profession. Negative X-ray reports have often been considered evidence enough to rule out a vegetable foreign body. In two cases the parents were told by a physician that the vegetable foreign body in the lung would dissolve and not give any trouble.

LOCATION OF FOREIGN BODIES

Air Passages

Trachea	7
Right bronchus	15
Left bronchus	7
Trachea-bronchi	3
Larynx	8
	40

Esophagus

Upper third	24
Middle third	7
Lower third	1
Artificial stricture	4
	36

A. Lye (2)
B. Typhoid (1)
C. Carcinoma (1)

Air Passages:

Here it is noted that the right bronchus was involved fifteen times and the left seven. The anatomy must be responsible for this finding. The right main bronchus is shorter and wider and is practically a vertical continuation of the trachea at a 25 degree angle, while the left bronchus deviates at an angle of 75 degrees and might be considered as a branch. The carina is situated to the left of the midline, thus tending to direct foreign bodies to the right and into the almost vertical right bronchus. As a rule a foreign body remained in the trachea only because its size or shape prevented it from entering either bronchus. In several cases the foreign body was in the trachea before bronchoscopy, but the forced respirations during the operative process caused it to at least partly enter one or the other bronchus. Three sand burrs were found in the larynx, with the sharp projections holding fast to the vocal cords. As is usual in these cases, there was a very marked reaction in the tissues of the larynx. This reaction is probably due in great part to an irritating substance present in the small projections. Portions of eggshell were present in the larynx of one infant and a piece of celluloid in another. One adult was seen with a piece of meat too large to go through the glottis.

Food Passages:

In the esophageal group twenty-four foreign bodies were found in the upper third; seven in the middle third; one in the lower third; and four in artificial strictures caused by either typhoid, lye or carcinoma. It is interesting to note that only one foreign body was found in the lower portion of the esophagus in this series. A cherry stone was found in an old lye stricture at necropsy in a child who had gradually starved to death while the stricture was being blamed for the marked obstruction. A penny was found tightly embedded in an old lye stricture and a prune pit was removed from a stricture caused by typhoid. In several instances pieces of meat and cartilage were found blocking carcinomatous strictures.

In the bronchial group 69 per cent of the patients were three years or under. Operative and postoperative risk is greatly increased in these little patients, and markedly so if any anesthetic is used. In the esophageal group only 33 1/3 per cent were three years or under. No adult appeared with a bronchial foreign body, but fifteen were found to have esophageal obstructions.

TYPE OF ENDOSCOPIC PROCEDURE

Air Passages:

Upper bronchoscopy without tracheotomy	29
Lower bronchoscopy with tracheotomy	3
Tracheotomy following bronchoscopy	1

In discussing endoscopic procedures, the ad-

AGE OF PATIENTS

Trachea-Bronchi	Larynx	Esophagus
2— 1 year or under	1— 6 months	2— 1 year or under
11— 1 to 2 years	1— 1 year	6— 1 to 2 years
9— 2 to 3 years	3—14 years	4— 2 to 3 years
5— 4 to 5 years	2—19 years	7— 3 to 5 years
5— 6 to 10 years	1—36 years	1— 8 years
—	—	1—14 years
32	8	2—17 years
		13—19 to 56 years
		—
		36

Trachea-Bronchi	Larynx	Esophagus
22 of 32—3 yrs. or under	2— 1 yr. or under	12 of 36—3 yrs. or under
26 of 32—5 yrs. or under	2—14 yrs.	19 of 36—5 yrs. or under
None over 10 years	3 adults	15 adults

visability of a preliminary tracheotomy demands attention. The decision whether or not to do a preliminary tracheotomy, especially in infants two or three years of age or under, is a very important one. Some very good men insist that the only safe way to remove a foreign body from the bronchus of an infant is with the aid of a preliminary tracheotomy. On the other hand, Jackson, with his broad experience, disagrees with this theory.

In our series, cases one, two and three, seen in 1918, were handled with the aid of a preliminary tracheotomy. The twenty-nine cases seen since that time were not. Of these twenty-nine, twenty-three were three years of age or under and thirteen were two years or under. Possibly the mortality record is justification for this procedure. In the thirty-two cases there have been two deaths. One fatality occurred after preliminary tracheotomy, the other after upper bronchoscopy without tracheotomy. We have found it necessary to do one tracheotomy following bronchoscopy because of dyspnea.

We feel that much valuable time is saved, surgical shock is less, and convalescence is aided by omitting the tracheotomy before bronchoscopic procedure. The length of time consumed in an endoscopic procedure certainly plays a great part in its success or failure. Prolonged examinations may and often do cause more serious trouble than the foreign body itself. It is very likely that several cases in this series, especially numbers five and thirty-one, are listed as favorable results rather than fatalities mainly because the first examination was discontinued on a time schedule and the patient was allowed to rest several days before further work was done.

The use of an anesthetic, the kind and the amount must play a very important part in determining the results of endoscopy, especially where the air passages are concerned. Some very good operators insist that a general anesthetic is advisable and possibly just as safe in most instances. It seems, however, that the consensus of opinion is decidedly against any anesthetic especially in children where there is a foreign body in the air passages. Jackson insists that no anesthetic should be used in children and claims that it is very dangerous. It is taken for granted that cocaine should not be used in young children. It can of course be a great help in older children and adults and should be used to permit better and quieter examination. It is our practice and has been for many years to use no anesthetic in infants or young children where the air passages are being explored, and only very rarely in esophageal examinations. Some years ago ether was used quite often even for bronchoscopic foreign bodies. Certainly when dyspnea is marked and the child must bring all muscles into play to get enough air, a general anesthesia is almost sure to cause a fatal issue by inhibiting the extrinsic muscles. Is it not likely that

ANESTHESIA

	Ether	Chloroform	Cocaine	No. Anesthesia
Bronchoscopy	13	1	1	17
Esophagoscopy	7		16	13
Laryngoscopy			5	3
	—	—	—	—
	20	1	22	33

In 33 cases where no anesthesia was used, 28 were children under 5 years of age; no one was over 10 years.

some operators may often favor anesthesia because of the fear that the struggling of the patient may hinder their work? Certainly there should be only one thought in mind; what method promises the greatest element of safety to the patient. Bronchoscopy may easily be done on a quiet and anesthetized child, the foreign body may be removed with very little difficulty, but the result may be fatal because of the anesthesia.

forceps, but each time it slipped away. The patient, a boy of ten, forcefully resisted all efforts. Because of the time consumed, work was stopped. The parents insisted on taking the child home. Later he returned with a definite lung abscess. They refused to allow bronchoscopy and tried Christian Science. A month later we were informed that the tooth was coughed up and all symptoms gradually disappeared.

RESULTS

	Cases	Recovery	Death	Complications	
Bronchoscopy	32	30	2	Lung Abscess	(2)
Esophagoscopy	36	33	3	Stricture	(1)
Laryngoscopy	8	8	0		
	76	71	5		3

Bronchoscopies and Laryngoscopies:

There were two deaths among the forty cases. The first fatality came six hours after removal of a large portion of lima bean by lower bronchoscopy through a tracheotomy wound. The patient was two and one-half years of age; the bronchoscopy was done in a farm home where proper after-care was naturally impossible. The second occurred on the operating table in a child of eighteen months. The child was practically dead when it reached the hospital. A bronchoscope was passed hurriedly to allow respiration, but it was of no avail. An X-ray taken a few hours before the patient entered the hospital showed a very dense shadow of the entire left chest. Much mucus and a few pieces of peanut were removed by suction through the bronchoscope and artificial respiration and stimulation were carried on for some time. Evidently this was a marked case of drowned lung. One patient returned after an uneventful early convalescence with dyspnea. This difficulty was caused by granulations which had formed in the trachea at the site of the tracheotomy wound. In only one instance was tracheotomy necessary following bronchoscopy and this, eight hours after removal of the foreign body. In case number fifty a lung abscess developed several weeks after portions of a kernel of corn were removed. The patient was bronchoscoped several times, pus was removed, but no foreign body was evident. Finally during the fourth bronchoscopy the complete outside covering of the kernel of corn was drawn into the trachea and removed while suction was being used. The lung abscess quite rapidly resolved and recovery followed.

There was a fortunate but rather humiliating result in case number forty-nine. The child had choked while in the dentist's chair. X-ray showed a tooth in the left lung. At bronchoscopy the tooth was located and grasped several times with

Esophagoscopies:

There were three fatalities in this group of thirty-six cases. One child of fifteen months died four hours after the second esophagoscopy for removal of a coin. The foreign body apparently disappeared in a pouch of the esophagus each time it was approached and remained elusive, even when fluoroscopy was used. The fatality was undoubtedly due to the prolonged examination and the ether anesthesia. The second case, a child of three, came to the hospital in an advanced stage of starvation and dehydration. An old lye stricture was blamed for the obstruction. The child died soon after admission. At autopsy a cherry stone was found lodged in the stricture. The third fatality was the result of a mediastinitis. A very large safety-pin was present in the esophagus with point through the wall. One unsuccessful attempt at removal was made. The patient's condition did not allow further procedure. One patient developed a stricture after removal of a piece of brass which had been present in the esophagus for eight months. The stricture was dilated several times with heated bougies and the patient has been well for six years with no difficulty in swallowing.

SUMMARY

Seventy-six foreign body cases were reviewed. Eight foreign bodies were present in the larynx; thirty-two in the trachea or bronchi; and thirty-six in the esophagus.

1. *Types and numbers of foreign bodies:*

A. Air passages: corn kernels most frequent, appeared eleven times; peanuts second, with six; sand burrs five, and watermelon seeds three.

B. Esophagus: coins led list with ten; two of the coins were silver dollars; chicken bones were second in frequency, with seven; four were of the flat, triangular type.

2. *Length of time foreign bodies were present in passages: Delay in diagnosis.*

A. Air passages: foreign bodies were removed from trachea or bronchi from a few hours to three months after ingestion. In two instances peanut particles were present for nine weeks before removal.

B. Esophagus: in a number of instances a foreign body was present for several weeks. A button was lodged for sixty days and a piece of brass for eight months.

3. *Location of foreign bodies:*

A. Air passages: foreign body was located in trachea seven times; trachea and bronchus three times; right bronchus fifteen times; left bronchus seven times; larynx eight times.

B. Esophagus: twenty-four were in the upper third, seven in the middle third, one in the lower third, and four in artificial strictures.

4. *Age of patients:*

A. Air passages: twenty-four were three years or under, twenty-nine were five years or under.

B. Esophagus: twelve were three years or under, nineteen five years or under, fifteen were adults.

5. *Type of endoscopic procedure:*

Air passages:

Bronchoscopy without tracheotomy	29
Bronchoscopy with tracheotomy	3

6. *Anesthesia:*

A. Air passages:	No anesthesia	20
	Ether	13
	Cocaine	6
	Choloform	1
B. Esophagus:	No anesthesia	13
	Ether	7
	Cocaine	16

In most instances no anesthesia was used in infants, especially if there were marked respiratory symptoms. At times better results were obtained in esophagoscopy by using ether even in a child. Cocaine was used in adults and older children.

7. *Results:*

A. Air passages:

Deaths	2	
Complications	2	(Lung abscess)
Recovery	38	

B. Esophagus:

Deaths	3	
Complications	1	(Stricture)
Recovery	33	

Discussion

Dr. Gordon F. Harkness, Davenport: I want to congratulate Dr. Gittins on his most interesting and splendidly presented report. I would first like to emphasize the indefinite symptoms so often presented by esophageal cases. Pain, of course, is not a criterion in these cases. First the X-ray plate, to be followed by fluoroscopic examination with a barium meal, should be used to eliminate the esophagus as a factor.

Secondly, I would emphasize the necessity of teamwork, in which each must do his equally important share. In our hospital work we are not assured of a nurse of experience. A couple of weeks ago I removed a penny from the esophagus of a little girl of three. I rather hurriedly instructed the nurse, before starting to work. After locating the penny, the nurse handed me the wrong forceps. I showed my irritation to the extent that the girl became confused. There was a moment or two when the entire routine was disturbed and I said "plenty." Fortunately there was no harm done and the penny was successfully removed. But with a little reflection I realized who had really been to blame for the confusion. I went back and apologized to the nurse, shouldered all the blame, as I should, because I had not given her a little more preliminary drilling.

To my mind it is rather unfortunate that in communities in which we live here in Iowa, one man cannot by common consent be delegated to do this work, because it is so largely a matter of dexterous technic, and we do not have enough cases to permit each of us to become a finished technician. My own experience is that there would not be any great financial gain to the one or loss to the others, because in my office when we are disappointed in hearing of the inability of a patient to pay for some work, "another bronchoscopic case" has become a by-word.

I think we all learn more from our failures. I recall one of my earlier cases when I was using the Brüning instrument. A small straight pin was located by X-ray high up in the esophagus. I passed my instrument but could not locate the pin. The examination was prolonged, and my Brüning outfit went out of commission. I telephoned my good friend, Dr. Dean, took the child to him, and the pin was found in the right pyriform sinus imbedded in the tissue with practically only the head exposed. My next case found me equipped with a new outfit. What I anticipated as being an easy case proved otherwise, partly through a faulty armamentarium and partly because of the peculiar imbedding of a small, sharp, thin object.

I recall a case where an esophagoscope was not passed. Perhaps it is worthy of mention. A professional sword swallower was sent in from some distance, having injured his esophagus while performing his act. He had fever and much substernal pain. X-ray revealed no foreign body. No barium was used. A mediastinitis of course was feared. Bismuth with a very little sterile water was given, and the body fluids replenished rectally. He made an uneventful and rather slow recovery and wanted to demonstrate his sword swallowing act to the nurses before he left the hospital, but I told him he could do it only over my dead body. This case is simply cited as a contra-indication to instrumentation.

There are cases which are only partially pertinent to the subject. I have found difficulty in obtaining the beautiful textbook pictures with lipiodol. I have a boy of fifteen who has a questionable lung abscess. He is in perfect health, athletically inclined, and

goes in for sports. Daily he voluntarily coughs up a large accumulation of sterile, pus-like material. X-ray gave a suggestion of an area in the upper part of the left lower lobe. No foreign body was discovered, and lipiodol injection was practically a failure. Our bronchoscopic examination was enough for this young man, and so far he remains "in status quo."

Esophageal diagnosis presents difficulties to me. I recall two rather similar cases of stricture near the cardiac orifice. In each I made a diagnosis of probable malignancy. In the one a single dilatation gave relief, but no further symptoms appeared for at least two years when I lost track of the patient. In the other temporary relief was followed by recurrence of symptoms and eventual death.

I have here an X-ray taken for a foreign body. This young lady worked in a store and had a small ribbon pin in her mouth. A sudden intake of air and it was gone, followed by sudden choking, distress and pain in the midline in the neighborhood of the larynx. This was on Saturday night. Her physician X-rayed her in his office and reported that he could not locate a foreign body. She refused to come to the hospital that night, but made an appointment for the following morning. Repeated X-rays did not reveal any pin, and she had no discomfort of any kind. Two days later she brought in the pin, saying she had coughed and suddenly found it in her mouth. The question is, was she "spoofing" me?

Dr. Wayne J. Foster, Cedar Rapids: I feel that it is unfair to Dr. Gittins to ask him to analyze 76 cases in this short period of twenty minutes. Certainly it is impossible for us to digest them. This paper contains a lot of very valuable information, and there are a great many things in it that I will be glad to have the opportunity to study carefully.

Fortunately or unfortunately, my series of cases does not run to 76. The interesting thing about it is that about 70 per cent of the foreign body cases presented to me have not come to me originally, but have come through the family physician, and in examination by careful history a foreign body was suspected.

I wish to emphasize what Dr. Harkness has said about teamwork. Dr. Pearson has insisted that all foreign body cases should be examined under the fluoroscope. Consequently, whenever we have a foreign body, Dr. Pearson comes along, and I have been very grateful to him. In the last year I had three cases, all of them supposed to be coins. Two of them proved to be car checks, and instead of one car check there were two in each of the cases. Fortunately, in one case the foreign body was removed and I was ready to celebrate when the nurse said, "the foreign body is still there," and I had one in my hand, so we went back and removed the second car check.

Dr. W. E. Pearson, Des Moines: This is a subject that interests all of us. Dr. Harkness said something of great value when he said that it is important to have teamwork. He also mentioned that the number of foreign body cases in any one community is not very great.

I happened to be one of those present when the Bronchoscopic Society was organized, and at that meeting called attenttion to two unusual cases. One was that of an old gentleman in his sixties. Three or four days previous to the time when I saw him he had been eating meat, when he had a paroxysm of coughing and something happened which prevented his swallowing up to the time I saw him. The bronchoscope and esophagoscope revealed nothing along these tracts, but there was a lack of symmetry in the external appearance of the throat. The X-ray revealed a fracture of the hyoid bone. With the proper strapping, the gentleman returned home and recovered within a short time.

Another case was that of a youngster about two years of age who had been under the care of several physicians over a period of two or three months because of difficulty in breathing. The bronchoscope revealed an egg shell in the larynx, the removal of which was followed by complete recovery.

This work has interested me over a period of years and I have observed a certain number of cases. More recently a gentleman has gone from Des Moines and taken a few weeks' course with Dr. Jackson and developed a technic which enables him to do this work well. He has the manual dexterity and the temperament which especially qualify him for this work.

While it is very important that foreign bodies be properly handled with the bronchoscope and esophagoscope, this type really makes up a small number of the cases to be dealt with by one practicing this specialty. In Des Moines, Dr. Downing, working in conjunction with the X-ray work of Dr. Burcham, form a good team for diagnostic purposes.

Dr. James A. Downing, Des Moines: Mr. Chairman, I like the bronchoscope. I think it is a lot of pleasure to use it. We have our own team. Dr. McCoy, Dr. Doane and I set aside every Wednesday morning for bronchoscopy, instead of going out and playing golf—sometimes Mac does both.

There are just a few things I should like to emphasize, in the matter of diagnosis particularly. The first thing is that you must have your trained help, not only your team to do your work like Dr. McCoy and Dr. Doane, but you must have an X-ray man that knows what you are looking for and can give you the information you want.

In the diagnosis or location of foreign bodies you have to consider the mechanics of foreign bodies. In the first place you have the trapped air. You get a little air in and none out and you are going to have hyper-resonance over that site. You are going to have your heart shoved over because you have the lung inflated and the diaphragm is going to be pushed down and stay down. You won't have motility.

When the patient breathes in, the heart is going to be shoved over a little bit, but on exhalation the trapped air shoves the heart back over to the good side. So when you have the trapped air the heart is always pushed over to the unaffected side. Then as the swelling gets a little greater, and the foreign

body gets down a litttle deeper, the foreign body is going to shut the air off, both on inspiration and expiration, and then the lung will collapse, and as soon as you get your collapse it is going to fill up in a very few hours with serum and your heart is going to be drawn over to the affected side. You will have first, collapse, then a drowned lung. So you have to differentiate between those two types in locating the foreign body.

The problem of getting a picture of some of these youngsters when they are a year or so old is rather trying, and your X-ray picture is worth nothing at all unless you get one picture on inspiration and another on expiration. Dr. Burcham is pretty good on that. He will get the youngster to cry and snap it, and then change his plate and get him to cry again and let out another yell and snap it again. Even once or twice we have been rather successful in getting an inspiration and expiration picture, and we have gone back under the fluoroscope to see where the foreign body was located.

As to the anesthesia, down at Jackson's place they do not use anesthetic, but use morphine, and with little children they do not use anything. It is by far the safest thing.

AXIAL MYOPIA: PHASES OF ETIOLOGY AND TREATMENT*

F. W. DEAN, M.D., Council Bluffs

Myopia is a condition of the eye in which parallel rays of light entering the eye are brought to a focus anterior to the retina. Axial or progressive myopia is a condition in which the eye gradually becomes lengthened in its anteroposterior diameter because of a giving way or a stretching of the sclera in its posterior half.

Axial myopia is divided into two types, simple and malignant. The simple myopia is that in which the anteroposterior diameter lengthens from the normal to that of one requiring a minus four or six diopter lens, and is then arrested. If the eye continues to lengthen, requiring a lens of minus ten, twenty, or more diopters, the term malignant myopia is applied. I believe the two types to be an identical disease. Fortunately in a majority of patients the disease is checked before the sclera is so stretched that the retina and choroid are much injured. However, it is impossible to know positively at the outset what the final outcome will be in any one case.

We are handicapped in the treatment of axial myopia for the reason that we are ignorant of the cause of lengthening. In a review of the literature we find many causes suggested. The following are some of them: eye strain from over-use of the ciliary muscles; action of the external recti; the superior oblique in convergence; a small ciliary muscle; inflammation of the choroid; an absence of the normal amount of elastic fibres in the sclera; a lessening of the normal calcium content of the blood and hence in the sclera; hereditary syphilis; chronic perinasal sinus infections; congestion due to gravitation on looking down, etc.

In the treatment of axial myopia, writers agree that the general health should be built up and safeguarded. When it comes to prescribing glasses, some give full correction for distance to be used for near as well as for far distance. Others give partial correction for constant use. Still others give either a full or partial correction and add a bifocal for near work. All are agreed that young myopes should be kept from much near work and that what near work they do should not be held nearer than 25 c.m. from the eyes.

When the power of convergence is weakened, causing crossed diplopia, prisms or muscle operations are recommended. In selected cases the extraction of the lens affords great benefit. The use of telescopic glasses is stressed by some. Telescopic glasses do give a clearer image, but the field of vision is so much narrowed that an extraction gives more comfort and is preferable when the eye is operable.

Now let us consider some of the causes given above and inquire why certain things are done if they are done, and why they are not done if they are not. First is the theory that myopia is caused by the excessive use of the ciliary muscle in accommodation. Helmholtz and his followers assert that when the ciliary muscle contracts, the lens becomes more convex of its own elasticity by relaxation of tension on zonules. It is claimed by others that the lens is not at all elastic but when the muscle contracts the vitreous is pressed against the back of the lens in such a way as to cause the anterior part of the lens to bulge forward and so increase convexity. Whichever way the lens acts, the change in the shape of the lens is brought about by the action of the ciliary muscle, and it is contended that this action produces the myopia, the vitreous pushing back against the posterior sclera as well as forward against the lens. If the act of accommodation causes myopia, why give glasses which will compel the eye to accommodate at any distance less than twenty feet? On the other hand if it is right that eyes should have normal accommodation for distance, why not allow normal accommodation for near work; that is, why advise bifocals?

Is axial myopia caused by action of the recti muscles? Those who believe it is admit that the intra-ocular pressure is increased very little, if at all, but insist that in contracting, the muscles press

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on the eyeball, forcing the posterior portion to bulge. There is at all times a constant tonicity of the extrinsic muscles. When any one of them contracts there is an additional tension of the others to steady its action. This tension does not squeeze the eye in such a manner as to cause a posterior bulging; on the contrary, it pulls the eye toward the apex of the orbit back against a cushion of fat which should support the eye and prevent bulging backward. If a contraction of the extrinsic muscles caused a stretching anywhere it should be at the anterior unsupported part. With a weakened cornea I can conceive of a keratoconus resulting but not a giving way of a healthy sclera.

If axial myopia is caused by excessive convergence and, as some believe, principally by the action of the superior oblique, why does not the process stop as soon as the eyes fail to converge? Why do not the advocates of this theory recommend the covering of one eye, thus doing away with all convergence except that following accommodation stimulus to the central convergence nuclei as the proper treatment?

Dr. A. Wood says the small ciliary muscle found in myopia is not the result but the cause of near-sightedness. He says that developing the muscle by bringing it into play explains why myopia is benefited by correcting lenses. That surely is a logical deduction if his premise is correct, but he has not proved that the muscle was small before myopia developed. Again, if his theory is true, why should the patient be forbidden to use his eyes for near work; why should he not be allowed to continue the development of his weak ciliary muscle?

That myopia is brought on by a choroiditis does not seem to me at all likely. My observation has been that myopia exists long before changes in the choroid can be seen. When changes do occur they appear as an atrophy, due to a stretching rather than an inflammation. Also the change in the vitreous ascribed to a choroiditis is caused by a change in the size of the cavity it occupies. When it is necessary for the vitreous to fill a larger space it does so by receiving fluid from the surrounding circulation. The excessive fluid condition of the vitreous, then, is purely a mechanical result of the enlarging cavity and not the result of an inflamed choroid.

To test out Levinsohn's theory of myopia by congestion on looking down, Essed and Soewarno put seven monkeys in a box and secured them in such a way that they were compelled to look down all the time. They concluded they had proved this theory correct because five of the seven monkeys (70 per cent) became myopic. They made no report as to the general condition of the monkeys and they had no control group. At least the abstractor did not mention it. It may be that five out of seven would have been myopic if they had been confined in a box for months with their faces up. That is to say, the general condition may have become so impaired by their close confinement and lack of exercise that the coats of the eye were weakened along with the rest of the animal's tissues and so the eyes became myopic, but not from the position of the eyes. If one were inclined to this theory of myopia from congestion on looking down, an excellent test would be to examine the eyes of the young workers in the Nebraska beet fields and the young Japanese gardeners in California and learn of their condition. They are on their hands and knees all day looking down while weeding. Their day of such work, too, is longer than the school day.

Hereditary syphilis is undoubtedly at times a contributing cause of myopia, yet how relatively few children with this disease are myopic even when there is a choroiditis present. Does not hereditary syhphilis bring on myopia only in those cases in which it interferes with the normal metabolism, endocrine functions or whatever causes a defective sclera?

H. B. Lemere attributes the cause of myopia to infections of the perinasal sinuses on account of the close proximity to the eye of the inflammatory processes. J. M. Patton, at the request of Lemere, examined the eye records in his office and found that approximately 70 per cent of the myopes had sinus infection. It would be interesting if he had examined the sinus records to see what per cent of them were myopic. Is it not more logical to regard the myopia as the result of the patient's general condition, made worse, perhaps, by the sinusitis because of its effect in lowering the general tone? On the other hand, it may be possible that the condition in the patient which brought on myopia made him more susceptible to a sinusitis. It may be that sinusitis sometimes causes myopia in the same way that hereditary syphilis does, but I do not believe that the close proximity has any causative effect.

Wiener thought he obtained good results by the instillation of adrenalin in the eyes over a long period of time. It must be remembered that most myopias terminate as a simple myopia and it is impossible to know with which type we are dealing until the final result is reached.

We see young patients with beginning myopia who are excessive readers. Might not their myopia be the result of indoor life without enough exercise in the sunshine, rather than of accommodation and convergence?

The movement for sight-saving classes for myopes is excellent. These classes can be taught without using the eyes for near work. When possible the classes should be conducted out in the open. In this climate at least, the class work should be conducted all through the warm weather months. Being out in the fresh air and sunshine with plenty of the proper exercise would benefit even more than the relief from near work.

Collins and Mayou say there is a lack of the elastic fibers in the elastic lamina, and that a stretching of the sclera begins where there is a split in this fine elastic supporting membrane. D. J. Wood, another English ophthalmologist, thinks the cause of axial myopia is a deficiency of calcium content in the blood and that this would weaken the sclera, as it does other supportive structures of the body. He points out that myopia comes on at the time of life when the demand for calcium by the bones is the greatest. He found a deficiency of calcium in the blood in vernal catarrh, keratoconus and myopia. He reports eight cases of malignant myopia with a calcium content of from 7.5 to 9.5 mg. per 100 c.c. of blood as against the normal of 11 mg. per 100 c.c. He thinks there may be an endocrine imbalance which upsets the normal conditions.

The large majority of eyes do not become myopic in spite of accommodation, convergence, congestion, choroiditis, perinasal sinus infections, etc. We must conclude, then, that the axial myopic eye has some inherent defect in the sclera. If the clinics which are connected with research laboratories would work along the lines suggested by Collins and Mayou and D. J. Wood, the true nature of progressive myopia might be found. A lack of calcium or elastic fibers weakening the sclera would account for the symptoms given by many as the cause of myopia.

Is not progressive myopia a weakened sclera caused by a faulty metabolism, or whatever? Have we not been treating symptoms which follow in the wake of a diseased condition instead of the disease itself? We say bow-leg is caused by rickets, not by walking. We keep the child off its feet, not to cure the rickets but to lessen the bow-leg. So we prescribe glasses, keep the youth from excessive near work, see that he does not bring the work too close to his eyes, and correct harmful posture. We prescribe fresh air, regulate the diet by giving food with proper vitamin content, clean up any sinus infections, instill adrenaline, etc. We do all these things in the hope of lessening the harmful symptoms of myopia.

It would doubtless require an immense amount of research work to discover what changes take place in the sclera, how the changes occur and when they occur, whether the disturbed process is prenatal or postnatal. If prenatal, is it from a defective germ cell or from aberrations occurring in utero due to disease or improper care of the mother? If postnatal, is it due to unhygienic surroundings, to a lack of the proper vitamin content of the food, as in rickets, or what? Regardless of cost or labor, if means of preventing or aborting axial myopia could be discovered it would be well worth while. "It has been proved that calcium firms the intercellular tissues and that in some way parathyroid controls the calcium metabolism in the body." (D. J. Wood.) The patient might then receive benefit from these theoretic remedies in addition to those already mentioned.

There is a high percentage of myopia among the Jewish people. They are also subject to rickets. May not the two conditions have a common cause, or are they hereditary, due to faulty germ cells? There is a large preponderance of high myopia in central Europe and eastern United States over this section of our country. Why should that be? Is it environment, faulty living conditions? Myopia is found among the illiterate as well as among the educated, so it cannot be caused entirely by accommodation and convergence, the result of close application to books, as some would have us believe.

Until research has discovered the underlying cause of axial myopia and found a remedy we will be forced to treat the disease empirically. To do this we must make use of all experience obtainable. If we follow in the rut of one line of symptoms we are not treating myopia scientifically, we are not treating myopia empirically and we are not doing justice to our patient.

Discussion

Royal F. French, M.D., Marshalltown: We all have a few ideas as to the cause of myopia in the back of our minds, but the textbooks all lead us to practically the same conclusions, and the theories are practically the same. They have simply rearranged the causes. There is no question but that the Jewish people are more prone to myopia than most of the Anglo-Saxon people. In looking over our records from the Indian Reservation at Tama, we find no cases of axial myopia among the Indians.

I want to take this opportunity to thank Dr. Dean for sending his paper to me in plenty of time to look up some matters. There are so many of us so apt to leave our papers until the last thing and send them to the men who are going to discuss them when it is too late for the discussors to go over the matter. I had Dr. Dean's paper several weeks ago, but in looking over our records I could not find any notations in regard to the nutrition of the children who come in.

Many of our records do not show the height, weight or general appearance.

I did have work at the State Juvenile Home two years ago, and I went over quite a few of the children down there, whose records show their height and weight. We found 80 cases of myopia, on which we had records of the height and weight, but we found that many of the children had left the home, and only 20 of them were available. I refracted these 20 again, to see how they were getting along with the myopia, and I found only three who showed any marked change. These are simply typical of the 20 out of the 80.

These children are, of course, of the poorer class, if we have a class in this country. Many of them are undernourished when they come to the institution, and their mentality is not always of the best. They do not do any close reading. Seldom do you see the children sitting around with a book outside of school hours. They have not done any close work of any kind, and their nutrition has been built up.

Seventeen were without any increased myopia. The average gain in height was 2 inches; the average gain in weight was 13.5 pounds. The three with increased myopia gained in height, and the gain in weight was 12.3 compared with the total weight gain of 13.5.

Now I am frank to confess this source is entirely too small from which to draw any marked conclusion, but as long as Dr. Dean was kind enough to send me his paper in time to give me something to work on, I tried to work it up.

I think that if all of us would possibly watch the weight of the children, watch the general nutrition, and make some notation in the records, we would get a better idea of the cause of myopia. It is strange how you do form an idea after you tabulate a series of cases and see how markedly certain facts do stand out that you had not thought of before. I think Dr. Dean is undoubtedly working along the right line when he says lack of nutrition may be the cause of some of our axial myopia.

Jay C. Decker, M.D., Sioux City: I first want to thank the essayist for the honor of being asked to discuss this splendid paper. Dr. Dean is to be commended for the painstaking work and thought which he has obviously given to this subject. It is a subject with which everyone who does refractions has to deal, and I am sure that we all feel our helplessness at times.

I think Dr. Dean's paper brings home to us very forcibly the fact that the last word in the etiology as well as in the treatment of the grave myopias, has not been written. I have always felt that the underlying cause is more systemic than local. We find high myopia more commonly in females, and most often in the type who are apt to have some endocrine disturbance, especially of the thyroid or parathyroid. Perhaps this is the cause of the calcium deficiency, held by some to be a contributing factor, and this stretching of the sclera may be, as has been suggested, the local manifestation of the general condition.

In my opinion, many high myopias are due to failure to detect and correct the lesser myopia in early life, together with the lack of proper hygiene and building up of the general system.

The myope should be examined once a year and should wear his full correction constantly. Some claim that the ciliary muscle is weak and the accommodation defective, and prescribe special reading glasses. This, I believe, is a bad practice, especially in the young. The myope becomes presbyopic at the same age and to the same degree as the hyperope. From this, it would appear that the myope has a sufficient power of accommodation.

If, however, an adult myope has never worn glasses, he has not trained his accommodation and he will likely have trouble for a time in wearing his full correction for near work.

The most common disaster to which highly myopic eyes are liable, is macular disease, either degenerative, inflammatory or hemorrhagic. For this reason, the eradication of all foci of infection, especially in the sinuses, is very important.

I agree heartily with the essayist that the treatment cannot be limited to one particular phase for every case, but must be modified according to the existing conditions, and that the safeguarding and building up of the general health is of utmost importance.

Harold J. McCoy, M.D., Des Moines: What has been said I think is true, but I think the fundamental basis of myopia is hereditary. We won't tell most of our patients to marry another one with the same degree of myopia.

Some time ago I read a paper before this session on this subject, and I have read literature, and I feel more and more that this is true. Of course, after we have a patient the thing to do is what has been suggested, but there is undoubtedly an hereditary trend or weakness, and as Dr. Dean has said, these people are myopic because they have been born that way, rather than by reason of environment and use of the eye.

E. P. Weih, M.D., Clinton: Mr. Chairman and Gentlemen of the Section. I have been greatly interested in this paper and this discussion, a subject that I have thought a great deal about. Anybody that has been in Europe is struck with the large numbers, generation after generation, that have myopia. When some of these families move to this country, their children, who are brought up in different environments, with different kinds of food, and better living conditions, do not have myopia. I am, therefore, convinced that heredity has not as much to do with this condition as we think. From my observation it is more of an internal affair than an affair of the way we live and use the eye.

Frank W. Dean, M.D., Council Bluffs (closing): I am very glad I sent my paper early to the gentleman who opened the discussion. I said so little in the paper that was definite, I was fearful they would criticize me for not saying anything, but I am glad they caught my meaning.

In regard to hereditary and family tendencies, I

would say it is rather the mode of life of families. We find myopia in the poorer Jewish families which is probably influenced by the shut-in and poorly nourished condition of the young.

There is more myopia in Europe and eastern United States than in this section, I think because of the difference of living conditions. As I said in my paper we do not know much about the cause, but it is my guess that living conditions have much to do with it.

As to the use of bifocals, I think it is a vicious practice. A great many recommend it, but what is accomplished by it? You think you are going to relieve accommodation, but what do you do? The child simply holds his work closer to the eyes and adds a convergent strain to his troubles.

HEREDITARY HYPERTENSION*

DANIEL J. GLOMSET, M.D., Des Moines

About 1910 Sir Clifford Albutt observed a number of patients whose only constant symptom was an elevated blood pressure. He thought that these represented a distinct disease which he labelled *hyperpiesis*. Since that time, this new clinical entity has risen like an island out of the unknown sea, and it has assumed such gigantic dimensions as to include practically all degenerative diseases which terminate man's existence upon this desirable planet, so that such former entities as myocarditis, apoplexy, and chronic interstitial nephritis now appear to be but isolated peaks on this new island. Farr is undoubtedly right when he states that hypertension kills annually more people than cancer and tuberculosis combined.

Small wonder, then, that physicians the world over have sought diligently to discover the exciting cause and the effective treatment of this disease. This afternoon I propose to give you my slant on the etiology of hypertension, and to outline a rational therapeutic procedure against it.

Mr. President, practically every factor known or thought to cause disease, has been suggested as the exciting factor in hypertension. I regret that time does not permit me to discuss the evidence for and against these supposed causes. The chart before you will convey some conception of their number and nature. It must suffice to state that with one exception I have been unable to find any valid evidence which links any of these factors to the etiology of hypertension.

The exception is heredity. Every practitioner has observed that high blood pressure runs in families. O'Hare and Walker found evidence in 68 per cent of some 500 family histories of hypertension patients, and only 38 per cent in even larger number of controls. Weitz, who studied the hypertension problem in a small German city, found evidence of hypertension six times in three generations, in two generations, and in one generation, in eighty-two cases.

I studied the family histories of 100 of my own cases of hypertension. During this study, it was noted that many of the younger members of the hypertension families also had elevated blood pressures. I therefore undertook to take blood pressure readings on 2,400 high school children, and obtained the following results:

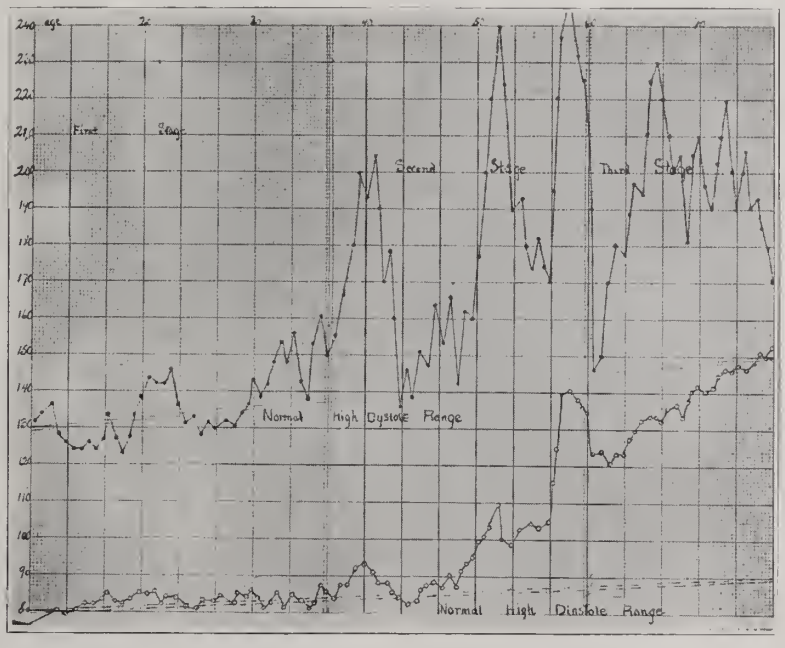
Thirty-nine per cent of children with high blood pressure knew of high blood pressure in their families, while only 10 per cent of children *without* high blood pressure knew of high blood pressure in theirs. Hence, it will appear that the underlying cause of high blood pressure is transmitted as a Mendelian trait, and for this reason, I wish to suggest the term *hereditary hypertension* for the disease which now generally goes under the name *essential hypertension*.

It is not clear at present just what is transmitted in this disease. Perhaps the future will bring out that it is an anomalous condition of the smaller arterial twigs. The morbid anatomy of hypertension is well understood. The changes found appear to be brought about by the increased tension on the blood vessel walls. These changes are of two kinds: first, a hypertrophy with final obliteration of the arteriolar walls leading to atrophy, necrobiosis, and destruction of the parenchyma involved; second, diametrically opposite changes, with some blood vessel walls undergoing atrophy, stretching, and finally giving way, causing first an increased blood supply to the parenchyma, then exudate and finally frank hemorrhage into the functioning tissue.

From insurance statistics, from the work of Alvarez and Diehl, and from my own experience, it will appear that hypertension begins in childhood and may continue to grizzly age. The chart before you is schematic, and is intended to represent the behavior of the blood pressure at various ages in hypertension. For the sake of clearness, I have divided the disease into three phases: the first may last a lifetime, but often terminates before the age of forty; the second rarely begins before twenty, and usually ends before sixty; the third rarely sets in before forty and may not begin until after eighty.

* Presented before the Seventy-ninth Annual Session, Iowa State Medical Society, Marshalltown, May 14, 15, 16, 1930.

The only symptom present during the entire first phase is a periodic elevation of the systolic blood pressure. The patient is unaware of his condition, and is, as a rule, in robust health. During the second stage, both systolic and diastolic levels are raised, and in individuals with an unstable vasomotor system, enormous fluctuations occur. This is the stage of vascular accidents. You can readily see how such onslaughts upon the blood vessels will lead to trouble. During this phase, patients may complain of dizziness, headache, etc. The heart undergoes hypertrophy, and pathologic conditions may be found in the urine. The third phase is characterized by organ failure. Symptoms of cardiac and renal failure with an increasing general debility are conspicuous in this stage.



Schematic chart showing variations in the blood pressure during the different stages of hypertension.

May I ask you to keep these various phases in mind as I go on to a discussion of the therapeutics of the disease, because a rational management is dependent upon the changing condition of the patient.

The number of specific treatments offered for high blood pressure is truly astounding considering the short time that the condition has been recognized. The list before you is by no means complete, yet it may serve to convey an idea of man's versatility when brought to bay by disease. It should also serve to engender in your minds the healthy suspicion that there must be "something rotten in Denmark"—and there is. Yet all these treatments are enthusiastically endorsed by their proponents who, without a doubt, are absolutely sincere in their attitude. But therapeutic faith, I fear, has arisen in the case of these various treatments as in so many of our empiric managements of disease: *first,* from our will to cure. The patient comes to us to be cured, and when he improves, it is because of what we did for him! *Second,* the lamentable lack of knowledge of the course of this and many other diseases; in other words, the lack of controls. In not a single instance does there appear in the literature any evidence that the results claimed have been controlled. *Third,* an efficient measuring rod, the criterion employed to determine the efficacy of any and all of these so-called specific treatments: the lowering of the blood pressure. Obviously, this is not a fair standard unless the lowering claimed is permanent, and is accompanied by an increased physical efficiency of the individual. At any rate, I have tried the following treatments on control cases of my own, and failed to observe potency in any of them.

Such results are, of course, to be expected if we are dealing with an inherited defect. But this, you say, is nihilism in therapeutics. I should very much welcome being called a therapeutic nihilist, because that is the epithet hurled at anyone who attempts to debunk medical practice, and I should love to enlist in the ranks of those who are engaged in this noble task: "For the harvest is plentiful and the laborers are few." So far as this disease is concerned, much may be accomplished by rational regime, and nothing whatsoever with the so-called specific treatments.

What, then, shall you and I do with the many patients who come to us for alleviation from their malady? Let us assume that in a routine physical examination the patient is found perfectly normal save for a systolic blood pressure of 160 mm. of mercury. What is to be done? About the worst thing that the physician could do would be to instill in such an individual a fear of high blood pressure. If he must be told anything, tell him the truth; to wit, that his blood pressure has in no way hurt him as yet, and that it may never do any damage; that a moderate elevation of blood pressure in an individual with normally strong arteries is an ad-

vantage rather than a disadvantage, in that it insures a certain protection against infection, is conducive to a sunny disposition, and that, by supplying an extra amount of blood to the brain, will increase his ambition and his power of achievement, and make him capable of executing tasks "worthy of men who strove with gods." In other words, tell him that such a person usually becomes the envy of his competitors and the pride of his family.

When, however, an individual with an unstable vasomotor system seeks aid in the second phase of the disease, the condition demands sagacious interference. Such an individual must be told that he is doing more work than his heart can stand, and that excitement, anger, and physical and mental stress must be zealously avoided in order to prevent vascular accidents. Such a person's life must be regulated so that his daily tasks are not more than the heart can stand without hypertrophy—in other words, the heart load must be reduced and the nervous system stabilized. This is done, first, by removing excess fat, if such is present, and second, by increasing the periods of rest which relieve the heart and at the same time act as a powerful tonic for the nervous system. Hence, increase the amount of sleep, prescribe an afternoon nap and frequent vacations. If his position entails constant physical stress or causes mental worry, his mode of living must be changed so as to eliminate these conditions. Finally, it may be necessary to supply such an individual with one of the many excellent nonhabit forming sedatives to be taken whenever a nervous storm is on. By these simple methods, the second stage may often be made to last until the man has reached his three score and ten.

It happens only too frequently, however, that hypertensive patients seek the physician's aid only when they are well into the third phase of the disease, when evidences of organic failure are only too obvious. In such instances, partial symptomatic relief is all that can be accomplished. The measures advocated for the second phases must be intensified here, and in many instances this means bed rest for long periods. When the heart is failing because of fibrillation, digitalis and rest are as efficacious as in the rheumatic type of this disorder, the only difference being that the periods of rest must be longer than in the rheumatic type. Christian and others have obtained excellent results with digitalis therapy even when the pulse is regular. When diabetes is present as an end phase of this disease, the treatment is identical with that of other forms of diabetes. If the morbid changes of the hypertension have been sufficiently severe so as to produce in the kidneys the so-called interstitial nephritis and renal failure, as manifested by a decreased phthalein and an increased blood urea, then, and only then, is definite reduction of protein indicated. In such patients, the protein can be reduced to 0.5 gm. per kilogram of body weight. The proteins should be given in the form most easily digested by the patient. The question of diet in this disease becomes exceedingly simple when one bears in mind that the morbid processes involve the organs of digestion just as much as other parts of the body; hence, the power of digestion is greatly reduced. The diet, for that reason, should be very simple and composed of readily assimilable food stuffs administered in small quantities at frequent intervals.

Yet, in spite of all that can be done, the patient progresses slowly but surely downward, and happy is he who before dusk gathers and noble man is reduced to a mere animal—I say, happy is he who, before that time, receives a *coup de grace* in the form of a fatal hemorrhage.

The treatment outlined will accomplish the following: *first,* eliminate the blood pressure phobia; *second,* prevent fatal accidents in the secondary stage; *third,* increase the usefulness and the happiness of the individual: *fourth,* lengthen the third stage.

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CORONARY THROMBOSIS*

H. W. RATHE, M.D., Waverly

Coronary thrombosis was first described clinically by Herrick in 1912. Since 1920 interest has gradually increased, due in part to the fact that coronary lesions give rise to a definite change in the electrocardiogram as well as to more accurate postmortem observations. Smith found this change following ligation of the coronary arteries in the dog. Among the earliest to observe cases at necropsy which, before death, had shown an alteration of the R-T segment, were Pardee, later Parkinson and Beford, and more recently Barnes

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and Whitten. They have definitely proved that it is due to coronary occlusion. Barnes and Whitten feel able to state which coronary artery is involved by the direction of the deviation. My report will deal, in part, with the clinical findings in twenty cases having the characteristic electrocardiographic findings.

Whitten has shown by a modification of the celluloid corrosion method, the average normal course of the coronary arteries. Both arise from the aorta at its junction with the ventricle. The left coronary artery supplies the anterior surface of the left ventricle, the adjacent one-third of the anterior surface of the right ventricle, the apex of both ventricles, all the interventricular septum at the apex, the anterior two-thirds of the remainder of the septum and the left half of the posterior surface of the left ventricle. The right coronary supplies two-thirds of the anterior surface of the right ventricle except the apex, also the posterior one-third of the interventricular septum except the apex, and the adjacent one-half of the basal three-fifths of the posterior surface of the left ventricle. Another characteristic of those arteries which is important to consider is that the branches of the right ventricle spread out in the same plane as their subdivisions, whereas those of the left ventricle branch at right angles. This fixes the left coronary artery and makes it less mobile than the right.

The pathologic picture of coronary thrombosis is myocardial infarction. This infarction may be acute or chronic. The former may take place from a sudden complete occlusion which may cause sudden death or gradual fibrosis, and collateral circulation will be formed. The chronic type is due to gradual obliteration of the lumen of the artery, with fibrosis. These areas of infarction vary in size and type depending on the size of the thrombosed branch and its location. If a large branch is occluded the destructive process involves a larger area, thinning of the ventricular wall takes place and a parietal aneurysm may form. Occlusion of a small perforating branch causes an infarction conical in shape which is recognized by a depression on the ventricular surface. A third type which occurs in the endocardium may cover a large area but does not cause much thinning of the ventricular wall. The left ventricle is by far the most frequently involved, due to the right-angle branching of its arterial supply, mentioned above. It is said that the coronary arteries are the most frequent seat of degenerative disease, aside from the aorta.

The onset of the symptoms is as a rule quite sudden and they are usually ushered in with pain. The attack may come on while at rest or following a slight exertion and it may have been preceded by mild anginal attacks for a considerable time. The pain is usually quite severe, but it may be only a sensation of retrosternal constriction, a heavy feeling, or what some call a discomfort. The typical picture is that of very severe pain which lasts for some time, often twenty-four hours or more, and requires large doses of morphine for even partial relief. The areas where the pain is witnessed vary; most often it is retrosternal or precordial and may radiate to the neck or arms. However, it may be referred to the epigastrium, wrist, or elbow, and in one case I have seen it referred to the sacral region.

The patients are very anxious and often alarmed. They have a strained facial expression with a peculiar ashen cyanosis. Collapse is practically always a marked feature. Sometimes they will complain of an alteration of the rhythm of their heart beat, which is caused by groups of premature contractions, or they may have an attack of paroxysmal tachycardia. The subjective symptoms very often will be only attacks of dyspnea or orthopnea without sensation of pain. There are cases which have none of these symptoms but die of coronary occlusion.

If the syndrome of retrosternal pain, dyspnea, friction rub, lowering of the blood pressure, weak heart sounds, collapse, fever, and leukocytosis, which is said to be typical, were always present the clinical diagnosis would be simple. The physical findings will vary with the size and location of the infarction. Accompanying the sudden and persistent pain there are usually collapse, dyspnea, fall of blood pressure and weak heart sounds. If the infarction is large and anterior, one will be able to hear a friction rub. Fever and leukocytosis most often follow in twelve to twenty-four hours, the former ranging from 99.5° F. to 101° F. and the latter usually averaging about 12,000 white blood cells. In those atypical cases where pain is not a feature the blood pressure is practically always lowered. In the typical cases the pressure may drop from systolic 140 mm., diastolic 80 mm. to systolic 98 mm., diastolic 70 mm. The pulse is weak and rapid. The heart sounds are feeble, distant and very often irregular. There may be rales at the bases of the lungs and signs of passive congestion of the liver and kidneys. Sometimes there will be nausea and vomiting which will make the picture fit in with an upper abdominal lesion, especially if the pain is in the lower sternal region. It is in these cases that differential diagnosis is very difficult and one must consider all of the above factors carefully. Where the symptoms are mild and consist only of dyspnea or orthopnea we are also confronted with difficulties. It is here that an

electrocardiogram is of especial value. The most typical change in the R-T segment before mentioned is a depression in either lead I or lead III with an elevation of that segment in the opposite lead. There is usually a downward convexity in the depressed segment with an elevation above the iso-electric line in the elevated segment. This is an early change and is usually followed by an inversion of the T wave in leads I and II or leads II and III with a positive T wave in lead III or lead I. Other findings may be bundle-branch block, notching of the Q R S waves and low voltage. These changes are very often present before symptoms are complained of and a prediction can be made of future difficulties, as in one case I shall report to you. The following analysis of my cases will outline the symptoms and findings of my patients, most of whom were seen several days to two weeks after the attack:

Of the 20 cases examined, 12 were male and 8 female. The youngest was 37 years of age, the oldest 78, the average age being 58 years. Nine reported previous hypertension. The complaints of the patients varied, 12 complaining of severe pain, 4 of mild pain and 4 no pain at all. Two had nausea with vomiting. The physical findings varied as follows: friction rub, 2; lowered blood pressure, 13; elevation of temperature, 3 (99 to 101 degrees); leukocytosis, 3 (12,500, 13,000 and 14,000); congestive failure, 6; enlarged heart, 12; positive Wassermann, 1; negative, 19.

Five of the patients died. Three had congestive failure. Three were given therapeutic bed rest, five restricted activity, two light work, and one was permitted regular duties. One patient has not been heard from recently.

It is said that the older the patient the better the coronary thrombosis is tolerated. This is undoubtedly due to the compensatory circulation formed by the thebesian vessels as well as by anastomosis between various portions of the coronary system. Osler made the statement that a man might get along very comfortably with one-fourth his normal coronary circulation. Some of these patients die almost immediately or within several hours after the occlusion, whereas others will recover at least symptomatically. An infarction will heal and as a result of the compensatory circulation a fairly good functioning heart will result. Others will have repeated attacks and die during one of them. Still other cases will develop congestive heart failure with or without cardiac enlargement. Others will have only signs of insufficiency without failure. There are a number of cases on record who are alive seven to ten years after the occlusion. It is worth while to remember that all these cases are not fatal and are worthy of our best efforts in treatment.

In the treatment of the acute case absolute bed rest and morphine sufficient to quiet the patient are essential. After the acute stage has passed, the bed rest must continue and another sedative, such as phenobarbital, may be substituted. The time such a patient is to remain in bed will depend on how he reacts. If the blood pressure returns to a nearly normal level, if the heart sounds are of fairly good quality, if the electrocardiogram (if available) shows improvement and the patient has no subjective symptoms, I believe you can then gradually extend his activities. It is very essential that these patients be carefully instructed as to limitation of activity, both physical and mental. Theobromin, theophylin and euphylin are drugs which are used to promote coronary circulation. Experimentally euphylin has proved the most efficient. Digitalis is used by some but in the acute stage it is not indicated.

CASE REPORTS

Case I—Admitted April 23, 1929. H. N., a male, age 66 years, entered the hospital with general anasarca. He had three attacks of rheumatic fever at the ages of 31, 33, and 52 years. His present complaint began in October, 1928, and gradually increased in severity until April 19, 1929, when he was forced to stay in bed. He has never complained of pain. On physical examination I found severe dyspnea, moderate cyanosis and general anasarca. The heart was markedly enlarged and there was a harsh systolic and a soft diastolic murmur at the apex. The liver was not palpable, due to abdominal fluid. The patient remained in the hospital for fourteen days, during which time he received eliminative treatment including ammonium nitrate and salyrgen. His response was very good and he was practically free from edema on his thirteenth day. On his twelfth day his blood pressure dropped from a daily average of 180/120 to 130/100. An electrocardiogram was made which showed the characteristics of coronary thrombosis. The following day, when making a call on him at the hospital, I found him very cyanotic and having an agonizing pain retrosternally. He was given a hypodermic of morphine and five minutes later he suddenly threw up his arms and stopped breathing.

Diagnosis: Inactive rheumatic fever, cardiac hypertrophy, left ventricular preponderance, mitral stenosis and insufficiency, coronary thrombosis, and congestive failure.

Cause of death: Coronary occlusion.

Case II—Admitted July 26, 1929. H. F., a male, age 67 years, complained of attacks of retrosternal pain, accompanied by pain in his left wrist. He had his first attack in February, 1929, with sudden onset and in spite of several hypodermics this pain persisted for three days. During this time his

temperature at its peak was 100.5 degrees. Leukocyte count was 12,500. After February he had several recurrences of the pain in his wrist. The past history was clear except for possible hypertension. On examination his blood pressure was 106/82, pulse 84. The heart was not enlarged, the sounds not well heard and there was a systolic murmur along the left sternal border.

Electrocardiographic diagnosis: Coronary thrombosis. On a subsequent examination following three months bed rest he had no pain and electrocardiogram was normal. Three months later I again heard from him and he was still free from pain.

Diagnosis: Coronary thrombosis.

Case III—Admitted June 25, 1929. E. D., a male, age 37, complained of pain beginning in both wrists, radiating up the arms to the sternum, and stopping in the midsternal region. His first attack began suddenly January 6, 1929, following a mild attack of influenza and persisted from 7:00 a. m. to 9:00 p. m. During this attack he was very short of breath and he perspired freely. Following this he had a numb sensation over the same area which persisted for several weeks. On June 22, 1929, at 6:00 a. m., he again had this severe pain in the same location and called a physician. One-half grain of morphine was given per hypodermic and at 8:00 a. m. he felt some better. A dull pain still persisted on June 25, 1929, when I first saw him. At this time he appeared to be quite ill and his temperature was 99.4 degrees F., blood pressure 110/86, pulse 105 and leukocyte count 11,000. His heart was not enlarged but P M I was diffuse and there was a heaving of the percordium. Heart sounds were weak and not well heard. Friction rub was not found.

Electrocardiographic diagnosis: Coronary thrombosis. He went home and remained in bed for eight weeks. He was up and about part of the time for four weeks longer. When I again examined him, his blood pressure was 140/108, pulse 76, and he had a normal electrocardiogram. He was sent home on restricted activity and reported back April 6, 1930. At this time he complained of dyspnea on slight exertion and an uneasy sensation in his precordial region which he said he could not describe otherwise. There was also some numbness in both arms. The pulse was 80, blood pressure 146/100 and his electrocardiogram showed definite signs of coronary thrombosis.

SUMMARY

Coronary thrombosis has a definite pathology and a variable clinical picture, the most persistent signs being sudden pain, dyspnea, collapse, lowering of the blood pressure and weak heart sounds. The electrocardiogram usually shows the characteristic R-T deviation. While sudden death very often occurs, these patients sometimes live a number of years.

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Discussion

Dr. John I. Marker, Davenport: If the doctor thought he was going to get a discussion from me as to whether that was the right or the left coronary that was occluded, he was mistaken. I cannot add anything to what the doctor has said. I can only emphasize a few points which concern those of us who are interested in the clinical side of handling these cases. It is of importance from the scientific standpoint as to which coronary is occluded, and the electrocardiograph has given us definite help in diagnosing these conditions, but the trouble with it is that when we need it to make our diagnosis, we don't have it with us. Most of us will never have it, and if we had it there we would be so busy doing other things we wouldn't use it. So the thing that we are interested in is what you and I are going to do when we see the case at the bedside or sitting up in the chair. The thing that we want to keep in mind is that we are going to find a seriously ill patient who looks and feels ill. He is scared. He shows the pallor, the dyspnea, the sweating that make us know that something serious has happened to him. With that picture in our mind of coronary thrombosis, what are we going to do about it? The doctor has told us some of these cases are going to die no matter what we do. We can suppose they die because they have had such a large area affected suddenly that the heart is unable to carry on.

Others are going to live for a short time and those are the ones whom I believe we should be concerned with, because of that number some are going to die because we are careless as to what we do with them. I had the privilege, not knowing it at the time, of taking care of the case that was presented to this society some four or five years ago of coronary thrombosis. I saw the patient eighteen months before, and the care that I gave him at the time was dictated by the fact that he was a seriously ill man; that he had substernal pain, was sweating, and had pallor and dyspnea, and I insisted on his being as quiet as we could keep him. He was put in an ambulance and taken to the hospital and given morphine to keep him quiet. Absolute bed rest was enforced, and luckily he came through, because he didn't have too large an area affected and because he looked sick enough so that I knew he ought to be kept quiet. But I didn't know much about the electrocardiographic findings.

We must impress on these patients that it is not just for a couple of days that they are going to be quiet, but they are going to be quiet for several weeks at the least, perhaps for three months, and as the doctor told us, their blood pressure and so on tells us when we can get them about. Absolute bed rest is something which I find we don't enforce often

enough. Absolute bed rest should mean that patients kéep their heads flat on the pillow. They don't feed themselves. They don't get up for any purpose. They don't raise up in bed. The nurse moves them with consideration in taking care of them. If we will enforce that we will save some of these cases that otherwise are just on the border line of passing out.

The thing that we want to keep in mind, then, is absolute bed rest, gradual return to activity and watching the heart until they are able to be about without danger to themselves, and then their activity must be restricted.

Dr. Walter L. Bierring, Des Moines: Mr. President, I should like very much to say a word in connection with the excellent paper of Dr. Glomset. In a very careful study of 100 patients with hypertension, he is able to state definitely that a large proportion of them are of hereditary origin in which there is a familial tendency. In this rather complex problem or condition called hypertension, it is of great interest to have at least a suggestive cause for the same. This is one of the finest pieces of clinical research, I think, that has ever been presented here. I hope the doctor in his future researches may be able to throw more light upon this very difficult problem.

In connection with the interesting paper by Doctor Rathe, I think we should remember first of all that this is a disease of very recent origin, and that twenty years ago we did not seem to know anything about coronary thrombosis. Osler with all his clinical acumen referred to it as a status anginosis because of the prolonged angina. As recently as five and six years ago, in the last edition of Sir James Mackensie, there is no mention made of coronary thrombosis as a clinical syndrome. It is entirely due to an American physician, Dr. James B. Herrick, and his associate, Dr. Fred M. Smith, who is with us now, that American physicians have had their attention called to the clinical syndrome that is so characteristic in that it permits of a diagnosis without any of the finer diagnostic aids. The interesting studies of the coronary circulation have been a great help in our conception of coronary thrombosis and occlusion. We know now that the coronary arteries and their branches are not end arteries, but have a definite anastomosis; also that tortuous changes in later life permit the coronary circulation to stand more insult, and also permit at least a temporary recovery. We recognize further that every attack of angina means a disturbance in the coronary blood supply, and every time such a disturbance occurs, an infarction area develops with inflammatory reaction and leukocytosis, resulting finally in fibrous tissue replacement, so that every angina attack means a scar in the myocardium. As these scars accumulate the myocardium becomes more and more damaged, resulting in that condition formerly referred to as myomalacia cordis or chronic myocarditis. In time this damaged heart muscle fails with all the attendant symptoms of heart failure.

According to the artery involved or the location of the occlusion, a different set of symptoms is presented. If near the pericardium, the symptoms of pericarditis are noted. If near the endocardium, a mural thrombus is formed from which subsequent emboli may appear in different parts of the body as types of apoplexy and other embolic phenomena. Again an involvement of the conduction bundles may produce the different forms of heart block.

Dr. Fred M. Smith, Iowa City: Mr. President, I wish to thank Dr. Bierring for his kind remarks. I have been very much interested in Dr. Rathe's series of cases, and feel that he is to be congratulated on the detailed manner in which he has studied them. As Dr. Bierring has just told you, the clinical picture of coronary occlusion is not generally recognized. It is extremely important, from the standpoint of treatment, that the condition be recognized. The most outstanding feature in the early clinical pictures of acute coronary occlusion is that of pain. Dr. Rathe, however, has cited instances in his series in which there was no significant pain. In the questionable case, the detection of structural changes in the heart is of utmost importance. If the physician will keep in mind the possibility of coronary occlusion in pain of the chest or upper abdomen and examine the heart carefully for possible changes in the findings, it will seldom be overlooked.

In extensive infarction, there is an easily recognizable increase in cardiac dullness, the appearance of a systolic apical murmur, change in the cardiac tones, frequent premature beats, possibly a pericardial rub, and often a significant reduction in blood pressure. Even in the absence of other findings, the alteration in the cardiac tones, particularly if associated with suggestive symptoms, should direct attention toward the heart.

Dr. Daniel J. Glomset, Des Moines: I simply want to say, as an old pathologist, I am happy to see that the syndrome of angina pectoris is disappearing and that in its place we have coronary disease.

Dr. John F. Ritter, Maquoketa: I rather hesitated to butt in here, gentlemen. My work has been accepted largely as a joke. But each year of intensive work along the line of control of arterial hypertension has given me the nerve to come up here and appear for a hearing. I wish to express my intense appreciation of the analysis that Dr. Glomset has made as to heredity being a strong etiologic factor, because it coincides absolutely with the results and conclusions at which I have arrived from clinical reactions secured during the last eight years in the handling of many hundreds of cases. While Dr. Glomset has been analyzing the etiologic factors, it has been my privilege to secure exceptional control of arterial hypertension, in spite of the fact that ordinarily we get but slight results, except temporarily, from medication.

However, the goat, who is at present standing the attack of general medicine, and rightly so from the way it has been handled by charlatans, furnishes an efficient means of control in this large class of cases. By the use of endocrines from the goat, hypertension can be as effectively controlled as is diabetes

by the use of insulin. The arteriosclerotic class we of course cannot cure, but the functional form almost invariably shows complete clinical recovery. But, in all cases, especially where cardiac decompensation is threatened, a remarkable reduction of cardiac labor is manifested within 24 hours. The formula for estimating this is to add the systolic and diastolic, multiply by the pulse rate, and divide by 1000. The normal is supposed to be from 12 to 18. The reduction noted in 24 hours by the administration of the interstitial hormone, at times combined with the anterior pituitary or the adrenal cortex, will reduce the systolic pressure from 25 to 75 points in twenty-four hours without depression, with a corresponding fall of the diastolic. Again applying the formula, the change in cardiac muscle stress will be readily demonstrated. Not infrequently the cardiac stress before the initial or "index" treatment of 1 c.c., will be reduced from an initial point of from 30 or 35 to 18 or 20, with decided relief of all the subjective symptoms. In many cases where we have feared to reduce the pressure readings, lest we produce too great interference with hydrostatic pressure, the urinary secretion becomes copious and nephritic elimination is decidedly increased.

Dr. Herbert W. Rathe, Waverly (closing): So often when you are at the bedside of a patient dying of coronary thrombosis, the history will be that several days before, he had an attack very similar to the present one. I think this emphasizes the value of bed rest. Absolute rest should be enforced, then the danger of further thrombi from the diseased area will be eliminated.

THE ANESTHETIC IN TONSIL AND ADENOID OPERATIONS*

John E. Stansbury, M.D., Cedar Rapids

The first work on the tonsil was done with no anesthetic, or by painting the tonsil and pharynx with a solution of cocain. At this time the guillotine was used. With the aid of a strong assistant to hold the patient, a part of the tonsil was engaged in the fenestra of the instrument and removed as quickly as possible. Later, a solution of cocain was injected around the tonsil before tonsillectomy in adults. Children were given a general anesthetic, chloroform being the agent used. With the advent of the dissection operation the tonsil was removed more carefully and in its capsule, the procedure requiring more time. This necessitated the use of an ether vapor machine which has been perfected and combined with a suction pump to remove the blood from the field of operation. The modern ether vapor suction machine is now a part of the standard equipment for practically all modern operating rooms used by the head specialists.

During the last ten years approximately 50 per cent of all operations performed in our two local hospitals have been done by the eye, ear, nose and throat men. Of these operations at least 80 per cent were for the removal of tonsils and adenoids. This rate is about average for communities of 50,000 population. My observations are based upon a series of 5,000 cases.

The choice of the anesthetic in the tonsil and adenoid work must be made as each case comes to operation. An intelligent history and a thorough physical examination are necessary for a decision on the best anesthetic for each case. A heart with damaged valves will stand either local or general anesthesia if compensation is well established, but one that is not compensated is a bad risk for either local or general anesthesia. Tuberculosis patients often need tonsillectomy and should always be operated under local anesthesia.

All acute throat and lung conditions are contraindications for tonsillectomy and should be treated until the condition is absolutely well.

The local anesthetic of choice from the standpoint of safety to the patient and satisfactory anesthesia is procain or the proprietary product novocain one-half per cent solution. The proportion of procain used to other local anesthetics is thousands of the former to one of the latter. Apothesine and butyn are used by a few operators but have not become popular. Cocain in solutions ranging from one-half to 20 per cent is used by a few operators.

The committee investigating deaths following the use of local anesthetics reports 57 such deaths, including 19 following the use of cocain alone, 11 with cocain and novocain, and 11 with novocain and adrenalin. Twenty-six of the deaths occurred during tonsil operations. The rest of the deaths occurred in other head operations and operations on other parts of the body. From this investigation the committee concluded that the safest local anesthetic for all use is procain in one-half to one per cent solution.

The few men who operate tonsil cases under nitrous oxide and oxygen anesthesia claim that convalescence is shorter, that the cough reflex is not abolished and that there are fewer complications. They find that an expert anesthetist is necessary because this anesthetic is dangerous in the hands of a novice. The cost is at the rate of about ten dollars an hour for the nitrous oxide and oxygen.

Chloroform is used by a few men but in my opinion it is too dangerous to be used as an anesthetic in throat operations. Dr. Lundy of the Mayo Clinic reported that no chloroform was used

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in the clinic during 1928 and that they saw no reason to use it in 1929.

Ethylene is not used in tonsil operations where the suction machine is employed because of the danger of fire and explosion.

Colonic oil-ether anesthesia has been used in throat operations but is practically abandoned because of the exacting technic and the accidents that have happened.

Up to the present time, ether is the only general anesthetic we have for tonsil and adenoid operations that has stood the test of time. In adults a preliminary hypodermic of morphin sulphate gr. 1/6 and atropin sulphate gr. 1/150 given thirty minutes before the operation makes the induction stage less disagreeable. Induction with nitrous oxide and the anesthesia maintained by ether given through a motor driven, ether vapor, suction machine, provides a satisfactory anesthesia for throat work. Nitrous oxide induction in children under six years of age has no advantage over induction with straight ether. The patient should be in the horizontal position, lying on the back or on the side, as the operator prefers. The head of the table should be lowered three or four inches. Very light anesthesia should be maintained so as not to abolish the cough reflex and suction should be used continuously. When the operation is finished and the mouth gag removed, suction should be used to remove the slug of mucus and blood that has collected in the pharynx. The patient should be placed on the side while being transported from the operating room to the bed. After reaching the bed all children should be placed in the prone position with a pillow under the chest. Adults should be placed on the side with a pillow supporting the upper shoulder.

Unless contra-indicated, general anesthesia is the most satisfactory for tonsil and adenoid operations, ether being the only safe and satisfactory one we have at the present time. In adults the disagreeable induction stage can be eliminated by the preliminary hypodermic of morphin and induction with nitrous oxide and oxygen.

The anesthetist must be a person of such skill as to maintain anesthesia without complete obliteration of the cough reflex. He must know enough about throat operations to be of assistance to the operator and not a mere figurehead.

By intelligent preoperative, operative and postoperative care of the tonsil and adenoid cases the majority of unfortunate complications may be avoided.

CONCLUSIONS:

1. A complete history and physical examination should be made preliminary to all tonsil and adenoid operations.

2. All patients operated under general anesthesia should be in the horizontal position, with the head of the operating table lowered three or four inches. Following the operation these patients should be placed in bed in the prone position with a pillow under the chest so as to favor gravity.

3. Continuous suction should be used in all cases operated under general anesthesia.

4. If a general anesthetic is used, ether is the safest and most satisfactory one and should be given by a skilled anesthetist experienced in throat operations.

5. If a general anesthetic is used, the anesthetist should maintain the lightest degree of anesthesia consonant with the necessary operative procedure.

6. If local anesthesia is used, procain in one-half of one per cent solution is the safest local anesthetic we have at the present time.

1026 Merchants National Bank Building.

1. Annals of Otology, Rhinology and Laryngology—March, 1928, p. 465.

Discussion

Ira N. Crow, M.D., Fairfield: I do not recall that I have ever heard a paper on anesthesia read before this body, and I think the chairman could not have chosen anyone more capable of giving a good paper on this subject than Dr. Stansbury. All of us who have watched his work, and that of our able chairman at Cedar Rapids, know what a great team they make, particularly in regard to their work under general anesthesia. Furthermore, I think that the discussion of this subject should be very general and thorough.

You take, for instance, the study of cases and history taking. Those of us who are out in the sticks, so to speak, who have many cases referred by men who give very little attention to the actual needs of the patient up for a tonsil operation, and who give perhaps less study to the anesthetic, know exactly what I mean by this. Too many of us have the doctor who refers the case give the anesthetic. It is very fortunate for those who have an anesthetist in their offices, who have teams worked up so they can use their own men. But how many of us have men give anesthetics who are on to the ropes? I have had men who were good anesthetists in other cases—do not misunderstand me—but who knew very little about tonsillectomy. Next to the patient, I do not know of anyone more important around the tonsil operation than the anesthetist, and as Dr. Stansbury has brought out, he can certainly be more than a figurehead. Giving the anesthetic for a tonsil operation should be a specialty in itself. It is very important that the one giving the anesthetic should be one who has done tonsil operations himself, and then he will appreciate the situation, and become a real assistant.

I have never used gas in anesthesia. I do not feel that I am quite fast enough to do it, and I do not want to be hurried. I want to take plenty of time to

look the patient over after I have operated to see if there are any bleeding points. Besides, we have no gas anesthetist at our hospital.

In giving a local anesthetic I have eliminated atropin. I think that it has had something to do with hemorrhage tendency afterward.

Recently sodium amytal has been brought out for general anesthesia. I have never had any experience with this.

I so thoroughly agree with Dr. Stansbury's views that there is very little more to say, other than to emphasize these points.

Of course, good teamwork is the main thing. A careful history should be taken and these cases should be studied with the idea of choosing for them the proper anesthetic, as the doctor has brought out.

Fred W. Bailey, M.D., Cedar Rapids (Chairman): The paper is now open for general discussion. I should like to add a few remarks to those already made.

I know from personal experience that in operating on throat cases it is very important to have an anesthetist who knows just exactly what you are going to do and who can in many ways be of great service. When I first engaged in private practice I used to do as many are still doing; that is, I had the family physician give the anesthetic. I soon found this very unsatisfactory. I looked about to find someone who had the time and inclination to give my anesthetics and teamed up with Dr. Stansbury, and he has given the anesthetics for me in over six thousand tonsil operations. We think we have the thing down to quite a system, and save the patient a great deal of time under the anesthetic, lessening the chance of postoperative trouble.

We have a careful record of all our cases. When we say we have so many thousand cases, we are not guessing. We have a record of the name of the patient, the hospital in which he was operated, and how they got along. Often one reads reports of operations which are merely guesswork. The only way to have statistics which mean anything is to have an exact record of the case in question.

I think a great many men do not pay enough attention to having a trained anesthetist to help them. This question should be considered seriously by everyone.

F. L. Wahrer, M.D., Marshalltown: I have been using gas as a general anesthetic for about four years, and so far I have had nothing happen to change my opinion of it as a very fine anesthetic for tonsil work. One reason that I like it is because its use is attended with considerable less shock to the patient than ether. Most of our children go under ether struggling and screaming.

It is very difficult to give a really light anesthetic with ether and keep the patient under control, and I feel that a light anesthetic which does not abolish the throat reflexes, as Dr. Stansbury mentioned, is one of the absolute essentials of tonsil anesthesia. I think if we keep away from complete anesthesia we are going to keep away from a great deal of trouble, especially in regard to hemorrhage and lung abscesses.

I find that children go under gas more easily and quickly than under ether, and most of them with hardly any struggle at all. You can keep their throat reflexes working and still have them sufficiently unconscious to do your work.

I happen to use a Ballenger-Sluder instrument which gives ample time to remove the tonsil in the one minute that you can have following removal of the gas mask, if you wish to remove it. If you wish to prolong the operation a little longer you can give the gas with a nasal inhaler. I use water suction when I am giving gas to keep away any spark from the electric machine.

My experience with gas has been very satisfactory, and I feel that my patients get along much better and convalesce much more quickly than if I were to use another type of anesthesia.

If I understood Dr. Stansbury, he stated, I believe, that a general anesthetic with ether is the one method of choice for tonsillectomy, and, if I understood correctly, that includes adults as well as children. That is something with which I cannot agree. I feel that adults should not be operated on under a general anesthesia if it is possible to do it under a local. I think that the operation is greatly complicated; that we are more apt to run into some very undesirable results in the way of lung abscesses and hemorrhage and prolong convalescence by giving general anesthesia.

There is no doubt but that the giving of a general anesthetic in the majority of cases increases the shock, as well as the attendant dangers. I feel that if we can get away from this we are rendering the patient a great service.

F. W. Dean, M.D., Council Bluffs: Just a word in regard to general anesthesia. I think the doctor is right in saying ether is more severe than chloroform, and chloroform is a dangerous thing, but I think the reason is that the doctor of the present day is not trained in giving chloroform.

I was graduated forty years ago, in 1890, and I have been using chloroform ever since. I have never had a lung abscess, never had a death from chloroform, the patients got along nicely, and do not have lung trouble.

You can give chloroform and get through with the operation and have the patient in bed before you can get him under with ether. You can have the patient under as lightly as you want, and it is an ideal anesthetic if you are trained in using it. However, I agree with the doctor that ether is the best, unless one is trained in the use of chloroform.

John E. Stansbury, M.D., Cedar Rapids (closing): I might add that a number of deaths caused by cocain have been caused by the operator filling the syringe from the graduate which he thinks contains novocain but contains cocain. This can be avoided by coloring the novocain solution with methylene-blue.

Ethylene is a very good anesthetic but there is danger of explosion unless water suction is used.

Dr. Evans of Buffalo reports using nitrous oxide in ten thousand tonsil operations. He states that the operator must be one who is willing to wait if the patient comes out of the anesthetic. He finds that the method of illumination during the average tonsil operation is a handicap when using nitrous oxide. Dr. Evans feels that the real objection to the use of nitrous oxide anesthesia in the tonsil operation is the blowing of blood into the operator's face and on his head mirror.

Dr. Henderson of New Haven brings out the fact that one must never forget the possibility of ether catching fire when used in a motor-driven apparatus. He reports a number of ether flares where the heavy ether vapor has collected near the floor of the operating room and has been ignited by a spark from the electric motor.

I feel that shock following a tonsil operation is usually due to too deep anesthesia rather than to the operation.

In comparing general anesthesia with local anesthesia, each one has its advantages and its disadvantages, and the operator must choose the one which he finds the safest in his hands and allows him to give his patient the best result possible.

PERITONSILLAR ABSCESS*

HARRY H. LAMB, M.D., Davenport

"Quinsy sore throat" has been dignified in recent years by more descriptive terms such as "acute suppurative peritonsillitis," "circumtonsillar abscess," "periamygdalitis," "peritonsillar abscess," etc. In spite of this, it remains a very painful and potentially dangerous condition. When one considers the frequency with which peritonsillar abscess is met, the paucity of lines devoted to it in our standard textbooks is rather surprising. This is probably due to the relative simplicity of the average case. Yet, the otolaryngologist is to be congratulated, who has not been in contact with a fatality or at least a near-fatality from a peritonsillar abscess. Possibly our reproach is similar to that of the pediatrician who has volumes at his disposal on the general derangements of babies but finds little about the most common—colic. The purpose of this paper is to present a general view of peritonsillar abscess.

ANATOMY

The faucial tonsil is a polymorphous mass of lymphoid tissue located in the sinus tonsillaris in the lateral wall of the throat. It varies in size and shape from that of a small almond to a large, unshelled English walnut. The sinus tonsillaris or bed of the tonsil is quite firm and is formed by the aponeuroses of three muscles, —anteriorly, the palatoglossus, laterally, the superior constrictor of the pharynx and posteriorly, the palatopharyngeus. Medially the tonsil is free except at its base where it merges with the lingual tonsil. It is of importance to note that passing from the base of the tonsil at the tongue toward the apex in the palate these aponeuroses exert a less close and firm application to the tonsil. Fowler and Todd[1] have recently shown that a newly described muscle known as the tonsillopharyngeus, accompanied by its nerve, blood and lymph supply, is attached to the tonsil at the junction of its middle and lower third, thus dividing it into two poles and holding the tonsil in place. Aside from this, the upper pole is in relatively loose apposition with the muscle fascias except for the blood and lymph vessels and a few fibers of connective tissue passing from the fibrous investiture of the tonsil to the aponeuroses. At the extreme apex, the palatoglossus, palatopharyngeus and superior constrictor aponeuroses continue on their way to the origin of their respective muscles, leaving the apex of the tonsil loosely imbedded in a soft mass of loose areolar tissue, vessels and glands.

ETIOLOGY AND PATHOGENESIS

Chemical and thermal extremes may cause peritonsillar abscess, but it is generally the result of invasion of the tonsil by pyogenic or anaerobic bacteria. In the usual case the bacteria invade the tonsil substance through a break in the epithelial lining of a crypt. As the crypts are much deeper in the middle and upper thirds of the tonsil, there is less adenoid substance to be involved between the base of the crypts and the thin fibrous investiture of the tonsil which offers feeble resistance to an overwhelmingly virulent infection. Thus we have a potential abscess formation in the loose areolar tissues between the tonsil and the fascia of the muscles, particularly that of the palatopharyngeus which forms not only the posterior pillar, but thinned out fibers of which form the major portion of the lateral bed of the tonsil. The abscess now formed may spread in any direction but it always chooses the path of least resistance. Below is the firm attachment of the tonsillopharyngeus to impede its progress. Posteriorly, laterally and anteriorly are the firm aponeuroses of the palatopharyngeus, superior constrictor and palatoglossus muscles to act as a barrier. It is possible for an abscess to burrow in any of these directions but the incidence is relatively very rare, because above is the loose-yielding supratonsillar space offer-

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ing practically no resistance. As the pus forms the tonsil is pushed toward the midline. Marked swelling takes place in the less resistant tissues of the soft palate and clinically as well as pathologically we have a peritonsillar abscess. We must remember that considerable swelling and edema, and much angina may be present before pus reaches the supratonsillar space. No doubt this explains that very embarrassing gesture known as a "dry tap."

SYMPTOMS

In the first day or two there is unilateral pain in the throat. This is made much worse by swallowing and frequently radiates to the ear. At about the third day the patient presents a drawn, pained, anxious expression, accompanied by slightly parted, drooling lips over closed jaws. A moderate fever, leukocytosis and foul breath are present. There is no stiffness of the neck but the head is held rather rigidly. When asked to open his mouth he does so with considerable pain and we see the tonsil displaced toward the midline. There is marked swelling, dusky redness and edema of the soft tissues above and anteriorly. Rarely there is swelling posteriorly. At times the index finger may be inserted and definite softening palpated over the site of the pus. Proetz[2] quotes Hafer's observations as follows: "Peritonsillar abscess may occur without bulging when scars of previous processes are present. He points out that as soon as an accumulation of pus occurs, paresis of the palatal muscles sets in, and regards this paresis as an indication for incision."

COURSE

It is not improbable that many cases of mild peritonsillar abscess subside spontaneously. The defensive mechanisms of the body may wall off the abscess, the pus become gradually absorbed and layers of new fibrous connective tissue laid down at the site of the abscess. This would explain the frequency of dense adhesions encountered during tonsillectomy. Barnes[3] speaks of untreated cases lasting two or three weeks or even becoming chronic with an intermittent discharge of pus. Escat[4] believes a true abortive peritonsillitis may exist but is very rare. If not treated surgically within a few days, nature, as a rule, takes a hand and by means of pressure necrosis, finally permits spontaneous evacuation of the pus. This rupture is usually anteriorly through the thinned-out palatoglossus muscle, but may be posteriorly, laterally or even medially into a crypt.

DIAGNOSIS

In most cases the diagnosis of peritonsillar abscess is self-evident. The unilateral character of the symptoms and signs is of great diagnostic value in the differential diagnosis. Not infrequently, a few days after a peritonsillar involvement on one side, the opposite side will present an abscess, but it is extremely rare for both to happen at the same time. Acute tonsillitis, septic sore throat, diphtheria and Vincent's angina are nearly always bilateral. Any of these conditions may produce a swelling but careful examination shows it to be of the tonsils themselves. A unilateral bulging is most unusual in any condition except quinsy. However, I feel that unless diphtheria can be ruled out clinically one should have a negative laboratory report for Klebs-Loeffler bacilli before incision in suspicious cases. In the face of a negative laboratory report, but with clinical evidence of diphtheria, incision should be postponed and antitoxin given.

COMPLICATIONS

The complications of peritonsillar abscess are legion. Fortunately the incidence in relation to the number of cases of abscess is very low. Unfortunately many of the complications are extremely severe, and the possibility should be kept in mind at all times. The more common are: otitis media, mastoiditis, nephritis, thrombophlebitis of the cavernous sinus, laryngeal spasm, Ludwig's angina, necrosis with hemorrhage, peritonsillitis pyemia, intracranial complications and mediastinitis.

TREATMENT

The prophylactic treatment of peritonsillar abscess is practically 100 per cent sure. A few cases have been reported after apparently clean enucleation, but these are exceedingly rare. Neuman[5] believes that an abscess in the peritonsillar tissue after enucleation of the tonsil is due to an infection of the mucous glands in the tissues of the velum palate extending to the hard palate. He reports finding a mass the size of a small plum in this location encountered during a tonsillectomy in a relatively young woman.

The general treatment of peritonsillar abscess does not assume a great deal of importance in the average case because of the short duration of the disease. Free elimination by means of catharsis and hot sweat baths is beneficial. Some patients are made more comfortable by warm saline or alkaline gargles followed by powdered aspirin in 10 to 15 grain

quantities. The ice bag applied externally is useful in arresting the progress of the swelling. The patient should be confined to bed.

There are many methods of treating a fulminating peritonsillar abscess but after all they are aimed at one and the same thing—evacuation of the pus.

Thompson[6] has developed what he calls an "abortive treatment of peritonsillar inflammation." External to the anterior pillar, through the region most generally selected when evacuating a peritonsillar abscess, he makes a stab incision with a cataract knife. This must be external to the capsule and extend well back. The incision is enlarged with long slender scissors and a drainage tube inserted. The tube is made from a small rubber catheter around one end of which one or two turns of adhesive tape are made to form a shoulder. This is inserted deep in the wound and the projecting end cut off even with the surface. This is left in place, being shortened as necessary until the inflammation has subsided.

Wharry[7] reports an "anatomic method of opening quinsy," which he claims is successful in spite of edema and bulging and inflammatory adhesions at the normal orifice of the fossa. He writes: "In order to evacuate the pus it is only necessary to break down the adhesions by introducing a pair of sinus forceps with closed blades into the supratonsillar fossa. The point of insertion is immediately under the arch formed by the anterior and posterior faucial pillars on the same side. A slight push is needed. As soon as they have penetrated the abscess the blades are widely opened, the adhesions are broken down, and the pus pours out."

Some otolaryngologists are successful in the evacuation of the pus by a partial dissection or separation of the anterior pillar from the tonsil. This may be accomplished in certain cases by slipping a moderately sharp, curved dissector in the line of cleavage between the tonsil and the anterior pillar and sweeping around the apex to the posterior side. In some cases the plica supratonsillaris may be clipped with sharp scissors and the dissector inserted sufficiently to loosen the inflammatory adhesions and allow the pus to drain.

Many well known men of high standing in our specialty believe the so-called radical cure is the most logical. Baum,[8] in a very masterful and persuasive discussion, states that tonsil enucleation is the treatment of choice. He prefers to operate at the second stage of the disease, just after the infection has migrated through the investiture of the tonsil and has become active in the potential space between the tonsil and the aponeurotic lining of the sinus tonsillaris. He writes as follows: "The surgeon on examination finds the tonsil pushed toward the midline with the beginning edema and dusky congestion of the mucosa which is characteristic of the condition. The typical bulging above the tonsil is not yet present, although the pain is unmistakable and the dysphagia is marked. During this second stage of peritonsillar abscess formation, ordinary methods of approach will not evacuate the pus, and it is therefore necessary to wait until expansion of the abscess in this limited space has resulted in migration upward around the upper pole of the tonsil in the areolar space in the palate. This, the third stage in the development of the disease, usually takes place in the space of three to five days, and may take longer in old cases with much peritonsillar fibrosis. Even at this stage it is not always possible to reach the center of the abscess with certainty, as old scars may so distort normal relations that the pus migrates in various directions."

Wallace[9] uses heat in all forms to aid the defensive mechanism and operates the third, fourth or fifth day. He theorizes rather graphically thus: "It is like taking off the rotting, useless trap door of a cellar which one wishes to empty and disinfect, and happens to be as simple." He reports a series of 120 cases, including one at three months pregnancy, one at term, and several with infectious fevers, such as scarlet fever, diphtheria, otitis media and mastoiditis, all successfully treated by tonsil enucleation.

For the radical cure local anesthesia is the usual method, although general anesthesia may be used if one feels he can rule out the possibility of aspiration of the freed pus.

Regardless of the newer methods, the classic treatment of peritonsillar abscess continues to be the most popular and the most widely taught. It consists in a stab wound in the affected side of the palate, just above an imaginary horizontal line drawn through the base of the uvula and external to a vertical line along the anterior pillar of the fauces. It should be one to two centimeters deep, depending on the amount of edema and the depth of the abscess. This incision must be external to the tonsil itself, to be effective. I find that a moderately heavy bladed cataract knife is particularly adaptable for this incision. It is bad technic to pry with such a knife, in order to make the incision larger, on account of the danger of the blade snapping. The closed points of a long.

narrow-bladed, nasal dressing forceps may be inserted in the wound and then spread to allow better evacuation of the pus. This method is simple, rapid, efficient and affords a great deal of relief. It has one great drawback, the pus may not be at the location of the incision. If there is definite pointing of the abscess, the incision should be made there, of course. In a few cases it is necessary to repeat the incision because the pus formation is not sufficient to keep the wound open.

Several instruments have been designed especially for draining peritonsillar abscesses. Most of these consist of some type of sharp-pointed, angular scissors with a guard one to two centimeters from the points to prevent their penetrating too far. After the abscess is reached, the points can be spread, allowing free drainage.

The question of anesthesia prior to opening a peritonsillar abscess is quite a problem. Some contend that the operation is over so quickly and the relief is so marked that no anesthesia is necessary. Others recommend swabbing the site of the incision with cocain varying in strength from two per cent to "cocain mud." Waring[10] suggests swabbing the proposed site of incision with five to ten per cent cocain and then slowly injecting one-half c.c. of two per cent novocain into the supratonsillar fossa. After waiting a few minutes he claims "the tissues are well anesthetized and may be freely incised without further discomfort to the patient." Hoople[11] suggests that since the anterior middle and posterior palatine nerves supply the upper part of the tonsil and the soft palate adjacent to it, and knowing that these nerves originate in the sphenopalatine ganglion, cocainization of the ganglion of the affected side should diminish sensation in the soft palate of the same side. In a small series of cases he points out that this method is much less painful than in cases where no anesthesia at all or other methods of local anesthesia are used. General anesthesia is seldom used because of the possibility of aspirating pus into the lung and setting up a lung abscess.

The after-treatment consists in general measures to make the patient more comfortable. Warm alkaline or saline gargles help keep the throat clean mechanically. Syringing the throat with the head well forward is more effective and easier than gargling. Of major importance is the setting of a date three or four weeks hence for the removal of the tonsils. If a definite time is not set, frequently the surgeon will not see the patient again until there is a recurrence of the condition.

SUMMARY

Peritonsillar abscess is an accumulation of pus in the potential space between the faucial tonsil and the contiguous fascias of the sinus tonsillaris. Because of the anatomic structure of this potential space, the pus usually migrates toward the soft palate. The disease is acute in its onset and course. The diagnosis is usually self-evident, but diphtheria should be ruled out before incision. There are many complications which must be kept in mind as possibilities. The treatment is evacuation of the pus in whatever manner seems the simplest and most efficient to the surgeon.

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THE COMPLICATIONS OF PERITONSILLAR ABSCESS*

W. H. Foster, M.D., Clinton

In presenting this subject for your consideration I will attempt to divide the complications of peritonsillar abscess into four main groups. The majority of these complications, particularly hemorrhage and pyogenic infection, arise from an extension of the parapharyngeal suppuration to the adjacent structures of the neck, including the large blood vessels and their branches.

1. *Hemorrhage:* This may be severe and the attacks repeated. It occurs primarily when the quinsy ruptures spontaneously or is opened by the surgeon, or secondarily several days after such spontaneous rupture or surgical opening. In any case the mortality rate in over fifty reported cases is more than 54 per cent and radical measures[1] such as ligation of the common or of the external carotid arteries do not materially influence this mortality percentage. The use of packs in the abscess cavity in hemorrhage has met with indif-

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ferent success.[2] It is not to be implied from the brevity of this discussion that hemorrhage from a peritonsillar abscess is not a most important and serious complication.

2. *Sepsis:* Pyogenic infections complicating peritonsillar abscess may be immediate or remote as to time and as to location within the body. It has been shown by histologic sections that in cases of post-tonsillitis pyemia there is practically always a peritonsillar abscess with an infectious thrombosis of the tonsillar and internal jugular veins.[3] This would seem to throw some light on the reason why we have authentically reported cases of the following pyogenic infections as complications of a quinsy: thrombosis of the internal and external jugular veins,[4] cavernous sinus thrombosis, meningitis,[5] nephritis, nephritis with cerebral apoplexy,[6] endocarditis, polyarthritis,[7] pleurisy, peritonitis, mediastinitis, cervical lymphadenitis[7] and numerous others.[8] It is also conceivable that sudden death in quinsy could come from an embolus from the above mentioned thrombosis.

3. *Respiratory tract complications:* Laryngeal edema occurs first, when the peritonsillar abscess invades the infratonsillar region, and second, from the use of gauze within the abscess cavity. Laryngeal spasm has been known to follow a peritonsillar abscess incision.[9] Practically every writer on this subject warns of the danger of lung abscess and pneumonia resulting from the aspiration of the contents of a ruptured quinsy. Reported instances of these are very difficult to find.

4. *Diphtheria:* As far as the writer has been able to determine, the literature of otolaryngology contains little or no reference to diphtheria as a complication of peritonsillar abscess. Some of the following cases from my own practice, which I will briefly outline, seem to suggest this as a possibility. I have tried not to confuse these cases with the phlegmonous or streptodiphtheritic angina,[10] of which I have seen two fatal cases, that were referred to me as bilateral peritonsillar abscesses in children.

Case No. 1. A. McM., a white boy, age 14 years, had been ill for two weeks. When first seen at 6 p. m., he was pale, cyanotic, emaciated, of septic appearance and breathing with a great deal of rattling and difficulty. The head was thrown back and the neck noticeably swollen on the left side. The patient could not speak. His pulse was weak, rapid, and irregular. His temperature was 98 degrees. His throat showed what appeared to be a very extensive left-sided peritonsillar abscess, unruptured, involving the soft palate and extending forward almost to the first molar tooth. The patient was immediately taken to the hospital and the abscess was opened without anesthetic by incising through the anterior pillar and puncturing with blunt forceps and spreading. A watery fluid containing a few blood clots was obtained and the swelling reduced and dyspnea relieved. No pus was observed. The patient was put to bed and stimulative and supportive treatment given. He was comparatively comfortable during the night, but was observed at 7:30 a. m. to have difficulty in breathing and was apparently on the verge of collapse. The swelling had reappeared in the throat and the wound was reopened by entering with nasal dressing forceps and spreading. This was followed by a rapid, gushing hemorrhage and the patient died almost immediately. Both operations were performed with the patient's head in a dependent position. No postmortem examination was made. I inserted my finger in the wound and could feel a large, smooth cavity, but it was impossible to detect whether or not any large blood vessels opened into it, although undoubtedly one or more did. Previously made throat cultures had been negative for diphtheria. My consultant felt that death was due to cardiac failure, probably from an embolus.

Case No. 2. W. L., a man, aged twenty-eight years, reported at my office with a developing peritonsillar abscess on the left side following a "cold and sore throat" which had not confined him indoors. He was told to return twenty-four hours later, when the abscess was opened through an incision in the usual location through the anterior pillar. The abscess cavity was entered with nasal dressing forceps which were spread as they were withdrawn. A small amount of pus appeared. Following this, the patient was at home in bed for several days. His neck on the left side became progressively involved with a rather hard swelling and the peritonsillar abscess remained about the same, despite daily reopening of the wound with blunt forceps. His temperature ranged from 101 to 103 and he became very septic in appearance, somewhat jaundiced and markedly prostrated. There was very little intake of fluids or food. On the fifth day following the onset, the patient had an abundant sudden hemorrhage from the throat wound. He seemed a little better the next morning and continued so until the seventh day at about 3 p. m., when another profuse hemorrhage occurred. He was then removed to the hospital and the wound packed with an adrenalin-soaked gauze strip which temporarily stopped the bleeding. The pack was removed gradually but was out only a few hours when hemorrhage recurred several times but not profusely. The patient died early on the ninth day. The coagulation time on entry to the hospital was over twelve minutes and every measure that could be taken to reduce it was administered, but failed. The throat culture taken on the eighth day was positive for diphtheria. At no degrees. Incision was deferred and the throat Both my consultant and myself have the opinion that death was due to toxemia rather than to hemorrhage.

Case No. 3. V. D., a white male, aged 17, had a left-sided peritonsillar abscess which was typical except that there was little prostration and practi-

cally no pain on swallowing. The temperature was 100 degrees F. Incision was deferred and the throat cultured. The quinsy ruptured spontaneously the next day. Throat culture was positive for diphtheria and repeated cultures were also positive. Diphtheria antitoxin was administered. The abscess discharged pus for three days. The patient then recovered promptly.

Case No. 4. J. S., a white girl, aged 12 years, had had a severe sore throat for several days and during the past twenty-four hours developed a marked swelling on left side of throat, with dysphagia. Temperature was 103 when first seen. A peritonsillar abscess was well pointed on the left side of throat. Both tonsils and part of the uvula showed a diphtheritic membrane. Cultures and smears were positive. Incision was deferred and antitoxin administered. Next day the quinsy ruptured spontaneously and the patient recovered.

Case No. 5. C. B., a white laborer, aged 38, reported June 4, 1928, at the office with a right-sided quinsy which was lanced and pus obtained. It was reopened on June 7, healed uneventfully and was pronounced well by June 14. A week later his family physician, who had referred him to me in the first place, telephoned me that the patient was dead of acute nephritis. Meanwhile the patient had returned to work and the onset of Bright's disease had been very sudden and severe.

CONCLUSIONS

The complications of peritonsillar abscess are said to be very uncommon, but when they do occur the prognosis is serious. The ideal treatment is their prevention by early drainage. Even so, the operator should wait until he is sure of obtaining pus before an opening is attempted. If the abscess is well pointed superficially, simple incision or puncture with guarded forceps and spreading is ideal and no anesthetic is needed. If the collection of pus is deeply placed and not well pointed, the method of Ballenger, or a similar one, should be used. Under novocain anesthesia, the pillar should be dissected away from the tonsil until the abscess cavity is reached. Every case of quinsy should be regarded as potentially dangerous. The presence of diphtheria should be routinely excluded by bacteriologic examination.

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Discussion

Charles B. Taylor, M.D., Ottumwa: I was supposed to discuss the paper, but I do not like to discuss a paper of this kind because it leaves nothing to be said. With the thought in mind that I would be able to find something I looked over all the literature I could find.

Let me emphasize one or two little things which I have found in my practice to be very beneficial. My finger has sort of been trained throughout all of my practice to recognize fluctuation in the form of pus, and I never pretend to open a peritonsillar abscess unless I can put my finger in there and find a focal point, or a point where there is evidence of fluctuation. I find that my finger—I don't know about your finger—has been trained to such a point that it tells me a lot of things. Then I have a place to put my knife or my puncture, whichever I want to use. I have used the old method of puncturing; that is, in the site described by Dr. Lamb, but I find that of late I am more and more using the process of dissecting away the anterior pillar, and I find you do not have to have any packing in it or any drainage tube. It seems to drain and the patient gets well. I have removed tonsils in some four or five instances, when the patients were agreeable to having it done, and they never knew they were sick.

Now that was a wonderfully good paper.

Cecil C. Jones, M.D., Des Moines: There are a few things relative to quinsy that I want to emphasize. The first has to do with the differential diagnosis. There are certain forms of pharyngeal diphtheria and occasional Vincent's angina infections that simulate quinsy. If the cellulitis is lanced in either case, a wound infection develops which is very disagreeable to handle. Occasionally following the extraction of a tooth or teeth, there occurs a cellulitis of the supratonsillar tissues which simulates a beginning quinsy, but it seldom progresses to suppuration.

The unusual cases, and those in which complications occur, demand our attention particularly. In bilateral quinsy, if marked dyspnea develops, we are justified in removing one tonsil to afford relief. Persistent or profuse hemorrhage following the opening of a peritonsillar abscess is perhaps our most dreaded complication. This is undoubtedly due to an extension of the suppurative process eroding through some of the larger vessels in this area.

Dr. Mosher presented an anatomic dissertation in his presidential address before the American Academy of Ophthalmology and Otolaryngology last fall, which has a definite bearing upon this subject. He called attention to an area termed "pharyngomaxillary space." It is not an actual space, but only potentially one. In the presence of such infections as are under discussion, it may become an actual space. It extends from the base of the skull down to the hyoid bone. It is bounded mesially by the superior constrictor, which in turn forms the lateral wall of the usual peritonsillar abscess. In

this space lies the internal jugular vein. It is by this route that the infection enters when septicemia develops as a complication of quinsy. The landmark of this space is the greater cornu of the hyoid bone. In the upper neck this greater cornu of the hyoid bone is also the surgical land-mark for the carotid sheath, and thus the guide for a rapid entrance to tie the external jugular in case of a severe hemorrhage. The only structure of importance superficial to the vascular sheath is the eleventh nerve.

I enjoyed Dr. Lamb's and Dr. Foster's papers very much.

Fred W. Bailey, M.D., Cedar Rapids, (Chairman): I think Dr. Lamb's and Dr. Foster's papers are well chosen and well presented.

We all have cases of quinsy to deal with and they all give us more or less trouble. Dr. Lamb has presented the quinsy problem in a very concise manner.

I want to compliment Dr. Foster on having the nerve, as it were, to report two cases of death following an operation for quinsy. To the laity quinsy is a rather trivial operation and when the public hears that a patient has had his throat lanced for quinsy and dies the following day, it does not help the doctor's standing in the community. I think we should all report our fatal cases as it is a great help and the only way to get statistics as to death following certain procedures.

T. U. McManus, M.D., Waterloo: As I reflect back on my quinsy experience, it seems to me I have been of the greatest service to my patients when I have been mistaken. When I have had a suspicion that they might have diphtheria and have given them 5,000 units of antitoxin, I think I invariably found that they got good results. I do not advocate it as a treatment, but I do believe it gives me a lot of relief.

Another mistake that has stood me well is where I attempted to dissect for drainage of pus and did not get it and finally had a hanging tonsil which I snared off. I think those cases have been treated the best of any.

If I ever have quinsy, I do not think I will have the nerve to have my tonsils taken out at that time, but I will consider it fortunate if somebody forces me to do it.

F. L. Wahrer, M.D., Marshalltown: I should like to report two cases I had during my service in the army. One of them turned out very unfortunately, and the other one, due to some guardian angel hovering over the man, got well.

The first was a case of quinsy in the beginning stage. A diphtheria culture came back negative. By the time I got the negative culture there was a very definite pointing of the peritonsillar abscess. This was incised, and the next day the man was very much better. In fact, he was so much better that he was up and around and conceived the brilliant idea that inasmuch as he lived only about 100 miles away from camp, which happened to be at Atlanta, it would be a fine time for him to get a furlough and go home and recuperate a little bit. It just so happened that we had an adjutant who did not have as many brains as he should have. Without saying anything to anybody he granted this boy a furlough and got the papers through and the boy went out that night. We were rather short in our help at the base hospital at that time and I was not very much worried about the patient anyway. I had seen him that morning and he was in fine shape, and the next morning I dropped around and he was gone, and I made inquiry and found he was on a furlough. I did not raise much fuss about it because I figured he was all right anyway.

About three days later his mother telephoned in and said that his throat was dry, he could not swallow, and wanted to know what to do about it. We told her to have him get back to the post as quick as he could. He came back the next morning. If I ever saw a case of diphtheria that was it. Notwithstanding the fact that he had a negative culture, he came back with marked diphtheria, and it was of a very malignant type. He died forty-eight hours later.

This was evidently a case of diphtheria just coming on which was not yet in the stage where you could get a positive culture at the time the drainage incision was made.

The other was a case which almost made me lose what little religion I had. A peritonsillar abscess occurred. I took not only one diphtheria culture on that boy, but I took two, and they both came back negative, and by this time the boy was begging for relief, and I did not blame him. I incised the abscess. I was in a hurry, and as soon as I struck the pus I went on, and I had not been gone fifteen minutes before I was called back because he was bleeding. I looked him over a little bit. The bleeding was not profuse but was steady. I said to the young man that that was a little hard luck but that I would stop it in a little bit. I got some gauze ready, and the boy said, "It will probably bleed more; I am a hemophiliac." I said, "What are you doing in the army?" He said, "I sneaked in. I didn't tell them anything about that, but I have always been guarded very carefully at home and I ran away and enlisted under another name, because I knew my folks would never stand for it, but would tell the authorities about it." He said, "If I scratch my hand it will bleed for hours." I never left that boy's side for twenty-six hours, during all of which he bled in spite of anything I could do. But finally,—I don't know whether I stopped it or not, or whether he bled until he couldn't bleed and more—I incised that wound. I opened it up until I had an incision about an inch long and then I packed it with everything that I could get in it. I used everything. In fact, I packed it with anything I could get my hands on, and I pulled it out and repacked it, and finally had a wound into which I was packing two yards of quarter-inch gauze bandage. He finally stopped, and got well. How he ever did, I don't know. At any rate I made a hit with

that boy, because about five weeks later he said to me, "Is that quinsy likely to recur?" I said, "It might." He said, "I would like to have you take my tonsils out."

THE CANCER PROBLEM*

A. V. Hennessy, M.D., Council Bluffs

Cancer is today the fourth most frequent cause of death in the United States, taking a toll of 100,000 lives annually, which is a 28.9 per cent increase in mortality since 1900. It is estimated that one out of every ten people living in the United States, between the ages of forty-five and sixty-five, is destined to die of cancer and that one out of every five deaths among women is due to this disease.

The increase in the mortality due to cancer can be explained partly by the increase in longevity. The average length of life in ancient times was twenty years, forty years in 1850, and forty-five years in 1875. It is fifty-eight years at the present time. This increase is directly due to the progress made in the hygienic and social conditions in civilized countries, which saves millions of people in early adult life. Thus a greater percentage of people are transferred to the advanced ages where cancer is of more common occurrence.

The improvement in skill and apparatus of the medical profession, making more accurate diagnosis possible together with improved methods of obtaining statistics regarding the causes of death are, no doubt, factors in explaining the increase in mortality.

The definite cause of cancer still remains a mystery. Much research work has been, and is constantly being done, and many theories have originated from this work as to the etiology. However, the conclusions of all workers as to the specific origin are not acceptable. The most recent theories are the bacterial and the cellular, and under each we find two separate groups.

Bacterial theories. One group believes cancer to be the product of living organisms, as are infectious diseases, but experimentation in animals does not seem to bear out this contention. A second group believes it to be due to a combined action of bacteria and a chemical agent. Gye and Barnard of England have investigated this feature, but other authorities do not believe their work to be conclusive because the work has been done with only one type of malignancy, sarcoma, and because of the liability to technical errors.

Cellular theories. These also comprise two groups, their theories being based upon a study of tissue cells in vitro as developed by Carrell. One group believes that cancer is produced by a specific process originating in the cell. The second group believes that cancer is the result of an interference with the phenomena of cell metabolism that destroys the normal rhythm of cell respiration and carbohydrate metabolism. Warburg of Berlin has done a great deal of work along this line. Bierich of Hamburg and Crabtree of London both believe that such metabolism is not specific for cancer tissue.

There are a few workers in Europe who are working on the idea that cancer begins as a systemic disease. This theory to date does not show any favorable experimental support.

While we have been unable to find the definite cause of cancer, a justifiable conclusion from the vast research work on the nature of malignant growths, is that no one cause, either inside or outside of the body, is alone responsible for this disease. It is generally accepted that cancer in its initial stage is entirely a local lesion, as evidenced by the numerous clinical cures that have occurred from a complete extirpation of the local lesion.

In considering the origin of cancer, we must not lose sight of the Virchow irritation theory. This theory holds that irritation over a period of time is productive of cancer, inciting the cells of the tissue to abnormal growth, regardless of the controlling influences of the tissue. As a rule, a local predisposition of the tissue must be assumed. Certain organs and certain sites in these organs are especially exposed to irritations of a chemical, mechanical or thermic nature and are more frequently attacked by cancer, as illustrated by the following types: cancer of the lip, due to a mechanical irritation as from a pipe stem, and cancer of the tongue and mouth, due to a combined mechanical and chemical irritation, as from tobacco-juice mixed with saliva, plus carious teeth. Skin cancers of chimney sweeps and paraffin workers are mechanical chemical types. Cancer of the stomach is also of the mechanical chemical type, particularly in the region of the pylorus. Carcinoma of the uterus probably originates from a mechanical defect plus a chemical alteration, following laceration and ulcer of the cervix.

Today it seems to be the general opinion that cancer is not an inherited disease but does have an inherited susceptibility and also that there is an inherited resistance to cancer. This opinion has arisen out of the work of Miss Maude Slye, who emphasizes the fact that there must be an irritation acting upon the heriditary susceptibility to produce cancer, and she even goes so far as to say that every one is immune except those with this inherited susceptibility.

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It is also generally accepted that cancer is not a communicable disease.

Early diagnosis is the only hope for cure. There is no disease in which delay and procrastination are fraught with such disastrous results. We see cases daily that are so far advanced that medical attention is futile. This condition is often the result of ignorance on the part of the patient, and, I am sorry to say, is often chargeable to the physician, because of incomplete or inefficient examination or because of procrastination due to the lack of confidence of the physician in the efficacy of our present therapeutic measures.

Early clinical diagnosis is not always easy, especially in the deep seated cancers. It is not sufficient just to make the diagnosis of cancer, but it is necessary to note the size, shape, exact location, extent of disease and degree of malignancy. It may be necessary to exhaust all our equipment in order to determine these factors; they are, however, essential to proper treatment.

It has long been felt by a great number of clinicians that cancers differ in their malignancy. Broders, of the Mayo Clinic, after exhaustive study, brought out a system of grading, dividing cancer into four groups based upon differentiation of cells. If three-fourths of the cells of the tissue are differentiated, and one-fourth undifferentiated, the tumor is of Grade 1; if the differentiated and the undifferentiated are about equal, it is Grade 2; if the differentiated are about one-fourth and the undifferentiated three-fourths, it is Grade 3; if these is no tendency to differentiation, it is Grade 4. He says that the mitotic figures and the number of cells with large, deeply staining nucleoli play an important part in the grading. The grade of the malignancy increases with the advancement of scale from one to four.

In arriving at the diagnosis, one should bear in mind that many other pathologic conditions coexist with cancer, and the diagnosis may be erroneous for that reason. Consequently when any disease does not yield to treatment in an expected period, further differential diagnosis should be made immediately.

For instance, the presence of tubercle bacilli or Vincent's spirilla in mouth cases, an associated chronic mastitis or cyst in breast cases, gastric ulcers independent of cancer, or bleeding hemorrhoids coincident with cancer of the upper part of the rectum, may confuse the physician in the diagnosis of cancer. Positive findings of such conditions have produced much mischief by delaying diagnosis and inviting harmful local treatment. Most common and probably most confusing is a positive Wassermann, for syphilis produces some lesions that closely resemble cancer, thus clouding the diagnosis.

The X-ray is a valuable aid in the diagnosis of bone and gastro-intestinal cases. It is also valuable in determining metastasis in other parts of the body. Balfour contends that examination by Roentgen-ray is the greatest contribution which has been made to the early diagnosis of cancer of the stomach.

Exploratory operation should be utilized in the event that a diagnosis is impossible and there is doubt as to the presence of cancer.

Biopsy is of unquestionable value but should be practiced with the greatest caution. Its advisability is condemned by many surgeons experienced in cancer work, unless the whole tumor is removed at the time of operation or extreme precautions are exercised to avoid transplantation and excitation of metastasis. Furthermore, the fact remains that proper material for examination is not obtained by removing a small section. At this point it is well to mention that all excised new growths should be examined microscopically, no matter how small or benign in clinical appearance. A large number of unsuspected early cancers have been found in this way. It is also necessary in order to determine the grade for prognosis and treatment.

THE TREATMENT OF CANCER

First—Prevention. This is accomplished by elimination and repair of any condition that might be a factor in the production of cancer, such as laceration of the cervix, tumor masses of the breast and other parts of the body, extraction of carious teeth, and correction of irritating rectal conditions.

Second—Elimination of delay. Education of the laity is a necessary means to this end. They must be made to realize that cancer is a curable disease, providing that it receives early medical attention. They should also be taught the first symptoms and what to do when they are believed to be present. This is best accomplished by educational campaigns such as are suggested and carried out by the American Cancer Society or like agencies.

A late report of the Pennsylvania Cancer Commission gives very definite proof of the value of public education upon the subject of cancer. In thirteen years of education, the time interval between the discovery of the first symptoms of superficial cancer by the patient and the first call on the doctor has been reduced from 18 months to 14.6 months, or 20 per cent. In deep-seated cancer, the interval has been reduced nearly one-half. Education has also reduced the time interval be-

tween the discovery of the disease and the application of proper treatment to an extent which has immensely increased the patient's chances of recovery.

Third—The cure. This is dependent upon complete destruction and removal. Any method for the cure of cancer, to be acceptable, should conform somewhat to the criteria as set forth by Geschichter. These criteria are: first, actual knowledge as to whether or not the patient has cancer (which implies biopsy); second, the ability to cure cases in all stages, even in the face of recurrences and generalized metastasis; third, permanence of the cure. These three criteria: histologic diagnosis, cure of metastatic cases, and permanent cure, established by follow-up examinations extending over five-year periods, should be applied to all alleged cancer cures.

At the present time, various new methods for the cure of cancer are being investigated and advocated, such as the lead treatment of Blair Bell and the gold chloride of Ochsner, which are based on the theory of susceptibility of cancer cells to certain chemical substances, especially the mineral colloids. We also have a number of men who advocate the use of lytic substances. The most recent theory is that brought out by Coffey and Humber which has to do with the use of a potent extract of suprarenal cortex.

To date, however, no satisfactory definite conclusion can be drawn as to the value of these methods, although more has been accomplished through the medium of surgery, together with the assistance of X-ray and radium, than by any other means.

At the present time, the status of X-ray and radiation therapy in cancer can be summed up as follows: It is generally accepted that external radiation alone is a safe method of treatment only for superficial cancer of the skin of the non-metastasizing type, and for those other forms of surface cancer which have been in existence so short a time that metastasis to the regional lymph nodes cannot possibly have taken place. Treatment by radium is to be preferred to operation in such precancerous conditions as keratosis and papilloma. Judd is of the opinion that in the superficial cancer, X-ray and radium, in the hands of expert radiologists, are running surgery a close race, but it is the general opinion that in the surface or accessible cancer of the metastasizing type they are best combined with surgery.

The employment of X-ray and radium in the preparation for operation and after operation as prophylaxis against recurrence has contributed greatly to the resources of the surgeon in dealing with cancer. They offer a great aid in the treatment of the inoperable and incurable cancer for symptomatic relief and comfort.

In the surgical treatment of cancer in general, the surgeon must be made to realize that conservatism is a grievous fault, as conservative treatment often leaves remnants of cancer which do not respond to the natural defensive and reparative powers as do other disease conditions; also, that cancer is not amenable to secondary operations for removal; and finally, that incomplete operations tend to stimulate the cancerous growth, resulting in conditions that are worse than the original, with increased suffering and early death.

Recurrence of cancer can be due, and no doubt in many instances is due, to transplantation of cancer cells and cancer emboli as the result of operative procedure. Cancer masses should not be roughly handled, and lacerated surfaces should be cauterized. Instruments coming in contact with cancer tissue should be discarded immediately for the balance of the operation. In instances where it is necessary to divide operative procedure into two or three stages, an unavoidable risk of reimplantation arises. However, this can be minimized by removing the primary cancer mass at the first operation.

The value of surgery in the treatment of cancer has been summed up by Judd, whose conclusions are as follows:

"1. The surgical treatment of cancer is based on the fact that cancer originates as a solitary neoplasm, and if operation is performed while the disease is still confined to a single area, the results will be very satisfactory.

"2. Certain cases of cancer seem to be hopeless from the beginning, and surgery, or any other method of treatment, apparently, does not influence the progress of the neoplasm.

"3. In certain cases in which the condition seems to be very extensive and to involve surrounding structures, there may still be a chance of cure by complete eradication.

"4. The most important development in our knowledge of cancer in recent years has been Broder's gradation of the malignancy according to the cell differentiation, which permits a fairly accurate prognosis, and prevents operating on a certain group of patients for whom treatment is of no avail.

"5. It is not my purpose to make great claims for the surgical treatment of cancer, yet I do contend that surgery has done more for persons suffering from this disease than all other methods of treatment combined. Although the results are somewhat discouraging, I believe that every patient who has a malignant growth should be given the opportunity of whatever treatment offers the

best results. It is not right to consider cases hopeless without first making a very careful estimate of the grade of the malignancy and of all other factors.

"6. Operations on patients whose condition can be shown to be hopeless are a discredit to surgery. Even palliative operations, if the growth could not be removed under ordinary circumstances, should not be undertaken."

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Discussion

Dr. William Jepson, Sioux City: I can do little if anything outside of emphasizing the points that have been so ably presented by the essayist, Dr. Hennessy, in considering the problems of cancer. I hope, gentlemen, you may not base your estimate of the importance of cancer upon what it is possible for Dr. Hennessy to do or what it has been possible for him to say in the brief period of fifteen minutes, or what I shall be able to say in the brief period of five minutes. He called your attention to the fact that one out of every ten in the United States past the age of 60 dies of cancer. Gentlemen, we are living in the state of Iowa and caring for its citizenship, and those figures do not entirely portray what is the actual situation here, which is namely this: One out of every nine and one-half, or rather two out of nineteen of the sum total of all our citizens that die, die of cancer. That includes the 10 per cent that die in infancy. If, on the other hand, we apply it to the cancer age, it discloses the fact that one out of every seven and one-half individuals that die, die of cancer. In other words, gentlemen, any disease that forces you to sign the death certificate in the instance of one out of every nine cases should indeed be of some importance to you. When you further think of the fact that the 2,600 individuals that die annually of cancer, suffer possibly anywhere from six months to a year before death relieves them, and you think of the economic loss and suffering, this indeed becomes a problem, and especially, gentlemen, I believe that I am pretty nearly stating the truth when I take the liberty of saying this is practically the only disease that you can cure.

You talk about your vaunted cures of this, that and the other, but all you do except in a few diseases like syphilis, malaria and a few others, is to help nature, aid her to restore herself to normality. But, gentlemen, in the instance of cancer and the individual who happens to become a sufferer from that, what happens? The patient with the rarest of exceptions is doomed to death, unless what? Unless you step in, as you can, to relieve him. I say you can step in to relieve him. That is not altogether true, but it is true indeed in a very large percentage. I want to make the statement that cancer is often preventable and curable if recognized sufficiently early and is so located as to be amenable either to removal or destruction prior to the development of metastasis.

The essayist has called your attention to the fact that cancer is often preventable. We will not bother ourselves as to whether it is due to a bacterium or whether it is due to a cell that has lost all self-respect for the economy in which it has residence. We do know that a constant stimulus to the cell, or rather irritant or object introduced in the way of that cell functioning as it should, will lead to the appearance of malignancy. Dr. Hennessy has already pointed out a number of instances where constant irritation is evident. Let me call your attention to another. For example, sarcomata and cancers (we use the terms synonymously here) appear in 1.5 per cent of all cancer in the upper and lower jaw. In the whole of the rest of the osseous system it appears in only one per cent. You will quickly recognize why, on account of the dentures. You again recognize that three per cent or so of cancer appears in the gall-bladder, possibly on account of the irritation of the gall-stones. Thus we might go on. We will say 14 per cent occurs in the uterus, generally in the cervix, the seat of old and unattended lacerations. So I think we may say if we will take cognizance of the fact that a continued irritant is very prone to develop malignancy, we may do much in the sense of prophylaxis.

Now we come to the question of its being recognized sufficiently early prior to metastasis. That is a real problem. Why? Because of the fact that cancer is different from any other lesion with which the human being is afflicted. In what respect? Patients generally consult you because of the fact they suffer discomfort, disability of function, or pain. Do they suffer from any of those conditions in cancer in the early stages? They do not. Therefore, unless you can get patients to recognize the fact that cancer is painless, and that there is not disturbed function, you are not going to see them in the early stage when you can make a diagnosis.

Dr. W. E. Sanders, Des Moines: Mr. President, I have been greatly interested within the last two or three years in the study of the genetic incidence of cancer. In the cancer problem throughout the world, a great deal of attention has been given to the racial side of the question within the last few years. Major Greenwood in England, Deelman in Holland, Pittard in Geneva and Niceparo in Italy are making very extensive ethnologic surveys of the population of those countries to determine the relative incidence in the different genetic types of people. If one makes a genetic survey of the population of Europe, one finds that in the peninsulas of Spain and Italy and the contiguous Mediterranean region there is the so-called Mediterranean race, which differs somewhat from the races in the central and northern parts. Along the Baltic lowlands is the so-called Nordic type, and sandwiched in between these two populations, which have come from differ-

ent parts of the world as distinct ethnologic migrations, is the so-called Alpine type, that virile race that occupies the highlands and river valleys of central Europe. Undoubtedly an ethnologic survey of the peoples of the world would show some such varying distributions of different types, but it is only in this particular region and only in the last few years that ethnologic studies have been made.

It develops that in those counties where the Nordic or Teutonic type of population prevails, it is that type which shows the highest incidence of carcinoma. In Holland, in the north of France, in England, in Denmark, in the Scandinavian Peninsula, and in Russia there is a considerably higher incidence of cancer than there is in the south.

Among the Mediterranean population there is the lowest incidence of cancer, while among the middle, or the Alpine type of population, there is an intermediate incidence of cancer.

This is interesting to me from the standpoint of heredity, and I surmise that in the next decade a considerable amount of valuable evidence will come out of genetic studies and the familial tendency. Personally I am as pessimistic as the two speakers who precede me in regarding the control of cancer. I am not so sold on the idea that irritations are a very important factor. Certainly in some instances they do occur, but the irritations which are attributed as the cause of cancer usually have taken place one or two decades before the cancer appears. Traumas to the cervix, mastitis, functional fluctuations up and down in the breast, are factors that occur throughout the intermediate period of life, but cancer is not a serious problem until we reach the fourth decade. At forty years cancer is an important cause of death. It increases in incidence in the living population thereafter as the square of the time elapsed. Many more people die of cancer in the proportion to those living, between seventy and eighty, than between thirty and forty. That means to me that irritations and all of the hitherto hypothecated causes of cancer are only secondary factors.

There is one important uncontradicted fact in the cancer problem, and that is senescence. It is the penalty we pay for growing old. To me cancer is a degenerative disease. It is a disease which is due to a system disharmony, a discordant correlation between connective tissue elements and epithelial elements. Like arteriosclerosis, like gray hair, like senility, it is a part of the thing which creeps on us with age.

It is interesting to note that in a patient with cancer in the early stages, you can inject those malignant cells into his circulatory system; but you cannot establish a metastasis to save your life. There is something more than the malignant cell in carcinoma; there is something present or absent in the blood or in the tissue of cancer individuals which in normal individuals restrains carcinomatous growth.

Dr. Hennessy (closing): I wish to thank the gentlemen for their discussion. I want to emphasize Dr. Jepson's point. To cover the field of cancer and to give you the facts that would be the last word on cancer in twenty minutes, is obviously impossible. I would like to leave this with you: first, cancer is primarily a local disease, and if properly diagnosed and estimated, and with the proper treatment of extirpation and the use of correlating agents, X-ray and radium, cancer is beyond question a curable disease. Unfortunately, cancer does not cause pain. Cancer only produces pain when it gets so enlarged or so increased in size that it either interferes with the function of the organ in which it originates or it encroaches upon another organ's territory.

A few months ago a young man forty-six years of age came to me with a history of about ten days of vomiting. His doctor had him for four or five days until he finally sent him along because he developed a complete obstruction of the stomach, with extensive distention of the abdomen and could not retain anything whatsoever. When he came to me, in eliciting his history I found that this gentleman had one early symptom previous to the present complaint. He had never had any digestive disturbances of any kind, but he had a symptom of a black, tarry stool existing since last September. X-ray examination revealed complete obstruction of the stomach, and when I made a rectal examination I found that he had extensive involvement in the rectum, and a mass in the abdomen on the outside of the rectum. I could also feel a mass over his stomach. I was somewhat at sea as to what to do, so I advised an exploratory laparotomy. When I opened the abdomen I found that this individual had a completely involved posterior wall of the stomach with cancer that was coming over the lesser curvature onto the anterior surface from above, and also around on the greater curvature from below onto the anterior surface as well. It was obstructing the pylorus, and he had an extensively involved liver. The liver was covered with areas in size from ten cents to one dollar. The mesentery glands along the entire root clear down to the sigmoid and rectum were involved, and the mass I found on previous rectal examination was a metastasis in the region of the rectum.

Of course he was absolutely incurable, but there was one early symptom. Had education been broad enough perhaps we might have seen that man when we could have done him some good.

In regard to Dr. Sanders' remark about the irritation theory, we can debate on that from here to hereafter. Yet we do know this, that if we do repair conditions that have become mechanically defective in regions where chemical alteration takes place, we do eliminate cancer.

DEHYDRATION IN EPILEPSY
PRELIMINARY REPORT*

Walter D. Abbott, M. D., and
Evelyn Fresk, B.S., Des Moines, Iowa

The brilliant results in the control of major convulsive seizures by dehydration are so evident

* From Departments of Neurologic Surgery and Dietetics, Iowa Methodist Hospital.

that further study and investigation of this phase of the treatment is justified. An effort has been made to add to the dehydration or limitation of the fluid intake by regulating the diet so that it is more convenient for physician and patient, and this paper is a preliminary review of the regimen used in a small selected group of cases.

It is estimated that over a half million persons in this country are afflicted with so-called "idiopathic" epilepsy, and the Surgeon-General's Library lists over three thousand publications on this subject, so it is evident that this has been and still is considered a very important phase of medicine.

Temple Fay has correlated pathologic, biochemical and physiologic research in a report of the dehydration factor of epilepsy, and has contributed an excellent review of the literature. He has proceeded on the basis of alkalosis preceding the convulsive state. With alkalosis there is edema, both intracellular and interstitial, as shown by Gamble. This condition has been produced in animals by Lennox and in humans by Foerster, with an alkalosis induced by hyperventilation. Rowntree produced convulsions in dogs with an excess of water given by stomach tube; Weed was able to achieve similar results when hypotonic fluids were given intravenously, and Kubie found that no convulsions appeared with the administration of hypotonic solutions, provided a drainage tube was left in the cisterna magna.

Elsberg and Pike further demonstrated the hydration factor in giving convulsant drugs to dogs; dehydrated animals required twice the dosage and interval as compared to normal dogs. However, all cases of *grand mal* are not on a biochemical basis, because there is definite evidence of underlying pathology which plays an important rôle in the production of the convulsive state in a large percentage of cases.

Winkelman and Fay have demonstrated an actual loss of cortical tissue following injury, whether it be at birth or later in life. It is accepted that trauma is a responsible etiologic factor in many of these cases, and interference with the mechanics of cerebral circulation may produce convulsions, be it on a traumatic basis as shown by Winkelman and Fay, a reduced caliber of veins draining the skull as demonstrated by Swift, or on a vasomotor basis.

Ely's pertinent observation that there is a tendency for children of parents with migraine to have epilepsy, lends evidence to a vasomotor phenomenon.

Thus, any factor which upsets the hydraulic pressure of the skull has a tendency to pull the trigger and produce the dreaded convulsion. If alkalosis alone were to blame, then the ketogenic diet of Peterman, Helmholz and Baborka should be sufficient to control this symptom complex, but it has been successful in only 40 per cent of the patients who have cooperated.

We have felt that it is necessary to go one step further and combine the dehydration regimen of Fay with a modified ketogenic diet. Twelve patients with *grand mal* have been under observation for six months, and in eleven cases the attacks have ceased, while in the other the number and frequency of seizures has been markedly reduced.

MANAGEMENT OF CASES

The patients were all placed in the hospital and instructed to measure the fluid intake and output in ounces. This measurement was then compared with the nurse's record, and after the patient understood the principle of dehydration, encephalography was performed to determine the extent of brain damage.

Encephalography is a trying ordeal for the patient and is not without some risk. The contraindications are choked discs and a spinal fluid pressure over 20 mm. of mercury. Because of the severity of this procedure it is felt that the visualization of the brain by injecting air and taking Roentgen rays should be limited to those patients who give a history of trauma or in which a tumor is suspected.

The severity and frequency of attacks are the basis on which fluid intake is limited, and if encephalography has been performed we also judge this restriction by the amount of cortical damage or dilatation of the fluid pathways. The moderately severe case is placed on a diet of 20 ounces of free fluid which consists of water, tea, coffee, cocoa or milk, and an average of 25 ounces of food fluid, or the amount of water in each article of food as shown in Table I.

The food is estimated at an approximate 1 to 2 carbohydrate-fat ratio and a two weeks' menu is shown in Table II.

The patient has difficulty in controlling his thirst for the first two weeks, but this may be allayed by chewing gum or sipping small amounts of hot water. As there is a marked weight loss, he is urged to regulate the caloric intake so that 2000 to 3000 calories are taken daily. Some trouble with constipation may follow this fluid restriction but it can be overcome with mineral oil and an occasional mild laxative. The urinary output should balance with the free fluid intake before the patient leaves the hospital, and frequent examination of the urine should be made.

No case has shown any evidence of renal dam-

age on this regimen and the patients are much brighter and more interested in life.

SUMMARY

The series of cases reported is small, but it is felt justifiable in view of the excellent results obtained over six months' time.

Cooperation and thorough understanding by physician and patient should be rewarded by diminution or cessation of attacks in all cases of *grand mal* in which there is no organic lesion producing the seizures.

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Table I

FOOD VALUES IN DEHYDRATION DIET

Food	Quantity	Ounces Weight	Ounces Water	Total Calories
Beef—				
Corn beef	1 slice	4	1 2/3	141
Roast	1 slice	3 1/3	1 2/3	380
Steak with fat off	1 slice	3 1/3	2	275
Tenderloin	1 slice	3 1/3	1 2/3	286
Chicken—				
Creamed on toast	2 h. tbsps.	4	2 1/3	273
Fricassee	1 slice	3 1/3	2	189
Roast	1 slice	3 1/3	2	181
Lamb—				
Chop with bone	1 chop	3 1/3	1 2/3	367
Roast	1 slice	2 1/3	1 2/3	150
Mutton—				
Roast leg	1 slice	2 1/3	1	234
Pork—				
Bacon	1 slice	1	1/4	194
Chop	1 chop	2 1/3	1 2/3	113
Ham, smoked, boiled	1 slice	1	1/3	93
Ham, fried	1 slice	1	1/2	140
Ham, roasted	1 slice	3 1/3	2	210
Sausage	1 sausage	1	1/2	164
Liver	1 medium piece	2	1 1/2	80
Turkey—				
Roast	1 slice	3 1/3	2 2/3	285
Veal—				
Cutlet	1 cutlet	2 2/3	1 2/3	104
Roast	1 slice	2 1/3	1 2/3	97
Meat gravies	1 tbsp.	3/4	3/4	26

Food	Quantity	Ounces Weight	Ounces Water	Total Calories
Fish—				
Cod	1⅔ h. tbsps.	3 1/3	2 1/3	98
Fresh Haddock	1⅔ h. tbsps.	3 1/3	2 1/3	108
Fresh Halibut	1⅔ h. tbsps.	3 1/3	2 1/3	121
Fresh Mackerel	1 h. tbsp.	2 1/3	1 2/3	104
Salmon	1⅔ h. tbsps.	3 1/3	2	198
Sardine	1 sardine	1/3	1/6	28
Shell Fish—				
Clams, long	6 clams	5	4	79
Clams, round	6 clams	3 1/3	2 2/3	47
Crabs, hard shell	1 crab	8	3	106
Lobster	1⅔ h. tbsps.	3 1/3	2 2/3	90
Oysters	6 oysters	2 2/3	2 1/3	44
Oyster stew		4	3	171
Dairy products—				
Butter	1 square	1/3	.....	77
Cream, average	1 tbsp.	2/3	1/2	54
Cream, heavy	1 tbsp.	2/3	1/3	72
Whipped	1 h. tbsp.	1	1/2	81
Cheese—				
Camembert	1 h. tsp.	2/3	1/3	58
Full cream	1 h. tsp.	2/3	1/5	86
Roquefort	1 h. tsp.	2/3	1/5	75
Swiss	1 slice	2/3	1/5	89
Cottage cheese	2 h. tbsps.	1 1/3	3/4	39
Milk—				
Buttermilk	1 glass	7	6	80
Condensed milk, unsweetened	1 tbsp.	2/3	1/5	87
Skimmed milk	1 glass	7	6 2/3	84
Whole milk	1 glass	7	6 1/3	157
Mayonnaise	½ tbsp.	1/4	.....	75
Eggs—				
Hens, uncooked	1 egg	1 2/3	1	76
Omelette—Ingredients: 3 tbsps. milk, 3 eggs, 1 h. tsp. butter	½ omelette	2 1/3	1 2/3	177
Vegetables—				
Beans, baked	3 h. tbsps.	5	3	298
Beans, lima	2 h. tbsps.	2 2/3	1 2/3	128
Red kidney	2 h. tbsps.	2 1/3	2/3	75
String	2 h. tbsps.	2	1 2/3	13
Beets	2 h. tbsps.	2 1/3	2	29
Cabbage	3 h. tbsps.	3 1/3	3	5
Carrots	3 h. tbsps.	3 1/3	3	18
Cauliflower	2 h. tbsps.	4	3 2/3	8
Celery, creamed	3 h. tbsps.	3	2 2/3	66
Celery, uncooked	3 small stalks	2 2/3	1 1/3	8
Corn, canned	2 h. tbsps.	3 1/3	2 1/3	101
Corn, green	1 ear	3 1/3	2 1/3	100
Cucumber, uncooked	8 thin slices	2 2/3	1 2/3	9
Lettuce	¼ head	2	2	9
Mushrooms, broiled	3 large, on toast	2	1	100
Onions	1 onion	3 1/3	3	42
Peas, green	3 h. tbsps.	3	2	110
Potatoes, sweet, boiled	a. size	3 1/3	1 2/3	204
Potatoes, white, baked	m. size	4 1/3	3	149
Potatoes, boiled	m. size	5	3 2/3	145
Potato chips	3 h. tbsps.	1 2/3	1/30	295
Potatoes, creamed	4 h. tbsps.	4	3	141
Escalloped potatoes	2 h. tbsps.	2	2	74
Mashed potatoes	2 h. tbsps.	3 1/3	2 1/3	112
Squash	2 h. tbsps.	3 1/3	2 2/3	69
Spinach	2 h. tbsps.	3 1/3	3	57
Tomatoes, canned	2 h. tbsps.	2 1/3	2	16
Tomatoes, raw	m. size	6 2/3	6	46
Turnips	2 h. tbsps.	4 2/3	4 1/3	6
Rice	2 h. tbsps.	3	1 1/2	43
*White bread	1 slice	1	1/3	80
Whole wheat	1 slice	1 1/3	1/2	106
Soda crackers	4 crackers	2/3	1/20	83
Corn bread, 2x2x1 inch		1 1/4	1/2	80
Brown bread, 4x4x½ inch		2 2/3	1	186
Rye bread, 3½x3½x½ inch		1 1/3	1/2	102

* Toast is figured at one-half the water content.

Food	Quantity	Ounces Weight	Ounces Water	Total Calories
Breakfast foods—				
Farina	2 h. tbsps.	3 1/3	3	56
Grapenuts	5 h. tbsps.	2	1/7	247
Cornflakes	2 h. tbsps.	1	1/14	124
Oatmeal—Ingredients: 3 tbsps. oatmeal, 2 cups milk	3 h. tbsps.	3 1/3	2	201
Hominy, boiled	2 h. tbsps.	3 1/3	2 2/3	84
Shredded wheat	1 biscuit	1	1/15	109
Macaroni, baked	2 h. tbsps.	4 2/3	2 2/3	447
Spaghetti, baked with tomato	3 h. tbsps.	3 2/3	3 2/3	150
Cookies, sugar, 2 inches in diameter	2 cookies	1	1/12	119
Chocolate layer cake, 1x1x½x3 in.	1 slice	1 1/3	1/4	149
Fruit cake, 2¾x2¾x½ in.	1 slice	1 1/3	1/4	171
Sponge cake, 2x3½x½ in.	1 slice	1	1/10	91
Pie—				
Apple	1/6 pie	4	1 2/3	352
Cream	1/6 pie	4	1 1/3	421
Custard	1/6 pie	4 1/3	2 2/3	243
Lemon	1/6 pie	3 2/3	1 2/3	288
Mince	1/6 pie	3 2/3	1 2/3	333
Puddings—				
Chocolate—Ingredients: 1 oz. chocolate, 2 h. tbsps. sugar, 1½ tbsps. cornstarch, 1 cup milk, white of 1 egg	2 h. tbsps.	3	1 2/3	208
Vanilla pudding, same as chocolate, with ½ teaspoon of vanilla added, replacing chocolate.				
Custard, baked—Ingredients: 2 cups milk, 2 eggs, ¼ cup sugar	2 h. tbsps.	4 1/3	3 1/3	183
Rice pudding—Ingredients: ½ cup milk, 1 egg, 1 tbsp. sugar, nutmeg, ½ cup boiled rice	2 h. tbsps.	2 1/2	1 4/5	80
Fruits—				
A. Fresh as purchased:				
Apples	a. size	5	3	72
Bananas	a. size	6 1/3	3	127
Blackberries	2 h. tbsps.	3 1/3	2 2/3	59
Cantaloupe	½ melon	15	8	93
Cherries	About ¼ lb.	3 1/3	2 2/3	76
Grapefruit	½ large	10	6	89
Grapes	1 bunch (small)	5	3	112
Gooseberries	4 h. tbsps.	3	2 2/3	52
Lemon	a. size	4 1/3	2 2/3	41
Orange	a. size	8 1/3	5 1/3	96
Peach	a. size	4 1/3	3	44
Pear	a. size	5	4	90
Pineapple	2 slices	3 1/3	3	44
Plum	a. size	1	2/3	29
Raspberries	2 h. tbsps.	2 2/3	2 1/3	46
Strawberries	4 h. tbsps.	3 1/3	3	40
Watermelon	Large slice	10	3 2/3	39
B. Dried, as purchased:				
Apricots	10 large	2 2/3	2/3	228
Dates	10 large	2 2/3	1/3	266
Figs	10 large	3 1/4	1	633
Prunes	10 very large	6 2/3	1 1/8	525
Raisins	10 very large	1	1/10	80
C. Stewed:				
Apples, baked	1 large	4	3	128
Apple sauce	3 h. tbsps.	4 1/3	2 2/3	201
Cranberries, stewed	2 h. tbsps.	3 1/3	2	153
Figs, stewed	3 figs	4	2 1/3	219
Prune sauce	4 very large and juice	6 2/3	5	189
Rhubarb, stewed	2 h. tbsps.	3	2	139
Cherries (no juice)	2 tbsps.	2	1 3/4	52
Peach	½ peach	2	1 3/4	25
Pear (large)	½ pear	2	1 3/5	45
Apricots	3 halves	2 1/2	2	54
Pineapple	1 slice	1 1/3	4/5	43

TABLE II

BREAKFAST

	Water	Calories
½ orange, sliced	2 2/3	48
1 slice white toast	1/6	80
1 egg	1	76
1 slice fried ham	1/2	140
2½ tbsps. grapenuts	1/14	123
3 tbsps. cream	1 1/2	162
2 squares butter		144
	5 6/7	773

DINNER

1 slice roast turkey	2 2/3	285
1 sweet potato	1 2/3	204
1 Parker House roll	1/3	80
1 h. tbsp. cranberries	1	76
3 h. tbsps. peas	2	110
Salad—		
¼ head lettuce	2	9
¼ fresh tomato	1 1/2	11
½ tbsp. mayonnaise		75
1/6 mince pie	1 2/3	333
3 squares butter		231
	12 5/6	1414

SUPPER

6 fried oysters	2 1/3	44
1 slice whole wheat toast	1/4	106
Salad—		
½ pear	1 3/5	45
1 tbsp. cream cheese	1/5	86
1 leaf lettuce		
¼ tbsp. mayonnaise		37
2 h. tbsps. vanilla pudding with cocoanut	2 1/3	183
2 squares butter		144
	6 7/12	645

Total fluids, 25 3/7 ounces.
Total calories, 2832.

BREAKFAST

	Water	Calories
½ orange, sliced	2 2/3	48
1 slice white toast	1/6	80
2 slices crisp bacon	1/2	388
3 tbsps. oatmeal	1 1/3	134
4 tbsps. cream (average)	2	216
2 squares butter	2/45	144
	6 32/45	1010

DINNER

1 medium slice roast beef	1 2/3	357
1 medium boiled potato	3 2/3	145
1 slice whole wheat bread	1/2	106
2 h. tbsps. carrots	2	12
2 stalks celery	8/9	6
2 h. tbsps. chocolate pudding	1 2/3	208
1 tbsp. whipped cream	1/3	72
3 squares butter	1/15	231
	10 7/9	1137

SUPPER

2 h. tbsps. macaroni and cheese	2 2/3	447
2 h. tbsps. tomatoes	2	16
Salad—		
½ pear	1 3/5	45
1 lettuce leaf		
½ tbsp. mayonnaise		75
1 piece of sponge cake (2¾ x 2¾ x ½ inch)	1/10	91
2 tbsps. whipped cream	1	162
3 squares butter	1/15	231
	7 13/30	1067

Total food fluids, 24 7/10 ounces.
Total calories, 3214.

BREAKFAST

	Water	Calories
Prunes, 3 (no juice)	2 1/2	94
2½ tbsps. grapenuts	1/14	123
4 tbsps. cream (average)	2	216
1 slice white toast	1/6	80
1 soft boiled egg	1	76
2 squares butter	2/45	144
	5 5/7	733

DINNER

1 medium piece of fresh salmon	2	198
2 h. tbsps. creamed potatoes	2 1/3	112
2 h. tbsps. beets	2	29
¼ head lettuce	2	9
½ tbsp. mayonnaise		75
1 slice whole wheat bread	1/2	106
1 slice pineapple	4/5	53
3 squares butter	1/15	231
	9 7/10	813

SUPPER

1 medium baked potato	3	149
2 h. tbsps. cottage cheese	3/4	39
1 tbsp. heavy cream	1/3	72
2 h. tbsps. kidney beans	1 2/3	75
Salad—		
½ peach	1 3/4	25
1 leaf lettuce		
½ tbsp. mayonnaise		75
2 h. tbsps. vanilla pudding	1 2/3	208
1 slice whole wheat bread	1/2	106
3 squares butter	1/15	231
	9 11/15	980

Total calories, 2526.
Total food fluids, 25 1/6 ounces.

BREAKFAST

2 h. tbsps. apple sauce	1 7/9	134
2 h. tbsps. cornflakes	1/14	124
1 slice white toast	1/6	80
2 slices crisp bacon	1 1/2	388
4 tbsps. cream (average)	2	216
2 squares butter		144
	4 4/7	1086

DINNER

1 slice roast ham	2	210
1 average baked sweet potato	1 2/3	204
2 h. tbsps. spinach	3	57
3 stalks celery	1 1/3	8
1 slice whole wheat bread	1/2	106
1/6 mince pie	1 2/3	333
3 squares butter		231
	10 1/6	1149

SUPPER

3 h. tbsps. spaghetti and tomatoes	3 2/3	155
3 h. tbsps. lima beans	2 1/2	192
1 slice whole wheat bread	1/2	106
2 h. tbsps. cottage cheese	3/4	39
1 tbsp. heavy cream	1/2	81
Lettuce leaf		
3 h. tbsps. white cherries	2 5/8	52
2 squares butter		144
	10 1/2	779

Total food fluids, 25 5/21 ounces.
Total calories, 3114.

BREAKFAST

3 figs	2 1/3	219
1 slice white toast	1/6	80
1 slice fried ham	1/2	140
2 h. tbsps. oatmeal	1 1/3	201
3 tbsps. cream	1 1/2	162
2 squares butter		144
	5 5/6	946

DINNER

	Water	Calories
1 steak, medium	2 1/3	273
2 tbsps. mashed potatoes	2 1/3	112
1 onion (creamed)	3	42
1 tbsp. cream	1/2	106
1 slice whole wheat bread	1/2	106
2 h. tbsps. rice pudding	1 4/5	80
2 squares butter		144
	10 7/15	863

SUPPER

3 h. tbsps. macaroni, baked with tomato	3 2/3	150
1 slice Swiss cheese	1/5	89
6 thin slices cucumber	1 1/4	7
1 leaf lettuce		
½ tbsp. mayonnaise		75
2 h. tbsps. custard	3 1/3	183
1 slice rye bread	1/2	102
2 squares butter		144
	8 1/2	750

Total food fluids, 24 4/5 ounces.
Total calories, 2559.

BREAKFAST

2 h. tbsps. white cherries	1 3/4	52
1 slice white toast	1/6	80
2 h. tbsps. cream of wheat	2	56
3 tbsps. cream	1 1/2	162
1 soft boiled egg	1	76
2 squares butter		144
	6 5/12	570

DINNER

Fresh halibut, 1 medium piece	2 1/3	121
½ baked potato	1 1/2	74
2 h. tbsps. beets	2	29
Salad—		
¼ orange	1 1/3	24
1 leaf lettuce		
½ tbsps. mayonnaise		75
2 h. tbsps. chocolate pudding	1 2/3	208
3 squares butter		231
	8 5/6	862

SUPPER

2 h. tbsps. boiled hominy	2 2/3	145
1⅔ h. tbsps. creamed codfish	2 1/3	98
1 piece of corn bread	1/2	80
Salad—		
1 slice pineapple	4/5	43
1 tbsp. cottage cheese	3/8	19
1 leaf lettuce		
½ tbsp. mayonnaise		75
3 h. tbsps. apple sauce	2 2/3	201
3 squares butter		231
	9 1/3	892

Total food fluids, 24½ ounces.
Total calories, 2324.

BREAKFAST

3 figs (no juice)	2 1/3	219
½ shredded wheat	1/30	54
4 tbsps. cream (average)	2	216
1 poached egg	1	76
2 slices white toast	1/3	160
2 squares butter	2/45	144
	5 67/90	869

DINNER

1 slice roast chicken (3½ oz.)	2	181
2 tbsps. mashed potatoes	2 1/3	112
2 tbsps. string beans	1 2/3	13
1 slice whole wheat bread	1/2	106
¼ head lettuce	2	9
½ tbsp. mayonnaise		75
1/6 apple pie	1 2/3	352
3 squares butter	1/15	231
	10 7/30	1079

SUPPER

2 tbsps. creamed potatoes	1 1/2	141
3 tbsps. peas	2	110
¼ fresh tomato, medium	1 1/2	12
½ tbsp. mayonnaise		75
1 slice whole wheat bread	1/2	106
2 h. tbsps. custard	3 1/3	183
1 tbsp. whipped cream	1/3	72
3 squares butter	1/15	231
	9 7/30	930

Total food fluids, 25 2/9 ounces.
Total calories, 2898.

BREAKFAST

1 baked apple	3	128
2 h. tbsps. post-toasties	1/14	124
3 tbsps. cream	1 1/2	162
1 slice white toast	1/6	80
1 poached egg	1	76
1 slice crisp bacon	1/4	194
2 squares butter		144
	6	908

DINNER

Veal cutlet	1 2/3	104
3 h. tbsps. creamed potatoes	2 1/4	97
2 tbsps. spinach	3	57
Salad—		
½ banana	1 1/2	63
1 leaf lettuce		
½ tbsp. mayonnaise		75
1 slice whole wheat bread	1/2	106
2 h. tbsps. vanilla pudding	1 2/3	208
2 squares butter		144
	10 7/12	854

SUPPER

4 oysters	1 5/9	28
4 ounces milk	3 2/3	89
4 soda crackers	1/20	83
1 egg, scrambled	1	76
1 tbsp. cream	1/2	54
½ pear	1 3/4	45
2 squares butter		144
	8 5/9	519

Total food fluids, 25 1/9 ounces.
Total calories, 2281.

BREAKFAST

Apricots (3 halves)	2	54
1 slice white toast	1/6	80
2½ tbsps. grape nuts	1/4	123
4 tbsps. cream (average)	2	216
1 scrambled egg	1	76
2 squares butter		144
	5 5/21	693

DINNER

1 medium slice roast lamb	1 2/3	150
1 tbsp. gravy	3/4	26
2 tbsps. rice	1 1/2	43
2 h. tbsps. turnips	4 1/3	6
Salad—		
½ pear	1 3/5	45
1 lettuce leaf		
½ tbsp. mayonnaise		75
2 h. tbsps. tapioca pudding	1 4/5	83
3 squares butter		231
1 slice whole wheat bread	1/2	106
	11 3/20	765

SUPPER

	Water	Calories
3 h. tbsps. baked beans	3	298
2 pork sausage	2	328
¼ head lettuce	2	9
½ tbsp. mayonnaise		75
1 slice chocolate cake	1/4	149
1 slice whole wheat bread	1/2	106
2 squares butter		144
	7 3/4	1109

Total food fluids, 24 4/7 ounces.
Total calories, 2567.

BREAKFAST

	Water	Calories
¼ grapefruit, sectioned	3	45
1 slice whole wheat toast	1/4	106
1 poached egg	1	76
2 h. tbsps. puffed rice	1/14	125
4 tbsps. cream	2	216
2 squares butter		144
	6 2/7	712

DINNER

	Water	Calories
Fresh mackerel	1 2/3	104
2 tbsps. creamed potatoes	1 1/2	70
2 h. tbsps. canned tomatoes	2	16
¼ head lettuce	2	9
½ tbsp. mayonnaise		75
1 slice whole wheat bread	1/2	106
1/6 cream pie	1 1/3	421
2 squares butter		144
	9	945

SUPPER

	Water	Calories
3 h. tbsps. escalloped potatoes	3	111
4 sardines	2/3	112
1 h. tbsp. cream cheese	1/5	86
2 h. tbsps. string beans	1 2/3	13
2 h. tbsps. custard	3 1/3	183
1 slice whole wheat bread	1/2	106
2 squares butter		144
	9 1/3	755

Total food fluids, 24 4/7 ounces.
Total calories, 2412.

BREAKFAST

	Water	Calories
1 banana, sliced	3	127
2 h. tbsps. bran flakes	1/14	112
4 tbsps. cream (average)	2	216
1 slice white toast	1/6	80
2 slices crisp bacon	1/2	388
2 squares butter		144
	5 6/7	1067

DINNER

	Water	Calories
Tenderloin steak	1 2/3	286
2 h. tbsps. mashed potatoes	2 1/3	112
2 h. tbsps. cauliflower	3 2/3	8
2 tbsps. cream (heavy)	1	144
Salad—		
1 tbsp. sliced beets	1	14
1 leaf lettuce		
½ tbsp. mayonnaise		75
1 slice whole wheat bread	1/2	106
2 tbsps. rice pudding	1 4/5	80
3 squares butter		231
	11	1056

SUPPER

	Water	Calories
3 h. tbsps. potato chips	1/30	295
1 slice cold ham	2	210
3 h. tbsps. corn	3 1/2	150
1 slice whole wheat bread	1/2	106
3 halves apricot	2	54
2 squares butter		144
	8 1/30	959

Total food fluids, 24 9/10 ounces.
Total calories, 3082.

BREAKFAST

	Water	Calories
2 h. tbsps. rhubarb	2	139
1 slice white toast	1/6	80
2 h. tbsps. Farina	3	56
3 tbsps. cream (average)	1 1/2	124
2 slices bacon	1/2	388
2 squares butter		144
	7 1/6	931

DINNER

	Water	Calories
Pork chop	1 2/3	113
3 h. tbsps. cabbage	3	5
1 boiled potato	3 2/3	145
1 piece corn bread	1/2	80
1/6 lemon pie	1 2/3	288
3 squares butter		231
	10 1/2	862

SUPPER

	Water	Calories
4 tbsps. creamed potatoes	3	141
6 large mushrooms on toast	2	100
Salad—		
1 slice pineapple	4/5	43
1 leaf lettuce		
¼ tbsp. mayonnaise		37
1 tbsp. whipped cream	1/2	81
1 slice whole wheat bread	1/2	106
1 slice fruit cake	1/4	171
2 squares butter		144
	7 1/20	823

Total food fluids, 24¾ ounces.
Total calories, 2616.

BREAKFAST

	Water	Calories
½ orange, sliced	2 2/3	48
1 slice white toast	1/6	80
½ omelette (recipe)	1 2/3	177
2 h. tbsps. cornflakes	1/14	124
3 tbsps. cream	1 1/2	162
2 squares butter		144
	6 1/14	735

DINNER

	Water	Calories
1 slice roast lamb	1 2/3	150
2 h. tbsps. mashed potato	2 1/3	112
3 h. tbsps. peas	2	110
¼ head lettuce	2	9
½ tbsp. mayonnaise		75
2 h. tbsps. chocolate pudding	1 2/3	208
1 tbsp. whipped cream	1/2	81
1 slice whole wheat bread	1/2	106
3 squares butter		231
	10 2/3	1082

SUPPER

	Water	Calories
1 medium baked potato	3	149
2 h. tbsps. American cheese	2/5	172
Salad—		
1 hard boiled egg	1	76
1 leaf lettuce		
½ tbsp. mayonnaise		75
1 baked apple	3	128
1 tbsp. whipped cream	1/2	81
1 slice rye bread	1/2	102
3 squares butter		231
	8 2/5	1014

Total food fluids, 25 1/7 ounces.
Total calories, 2831.

BREAKFAST			
1 sliced banana	3		127
2 tbsps. cornflakes		1/14	124
4 tbsps. cream	2		162
2 slices crisp bacon		1/2	388
2 slices white toast		1/3	160
2 squares butter			144
	5	4/7	1105
DINNER			
1 slice liver	1	1/2	80
1 medium baked potato	3		149
3 h. tbsps. creamed celery	2	2/3	66
1 slice whole wheat bread		1/2	106
¼ fresh tomato	1	1/2	11
1 leaf lettuce			.....
½ tbsp. mayonnaise			75
1/6 custard pie	2	2/3	243
3 squares butter			231
	11	5/6	961
SUPPER			
3 h. tbsps. baked squash	4		102
2 h. tbsps. lima beans	1	2/3	128
Salad—			
1 egg (hard boiled)	1		76
1 leaf lettuce			....
½ tbsp. mayonnaise			75
1 slice whole wheat bread		1/2	106
1 slice pineapple		4/5	43
2 sugar cookies		1/12	119
3 squares butter			231
	7	1/2	880

Total food fluid, 24 1/3 ounces.
Total number of calories, 2946.

College of Medicine
State University of Iowa

(From the Proceedings of the University Hospital Medical Society.)

SYMMETRICAL SCLERODERMA ASSOCIATED WITH METASTATIC CALCINOSIS

Report of a Case

James C. Kessler, M.D.

Calcinosis is more often associated with scleroderma than with other diseases, yet this association is quite rare. On reviewing literature I found that fourteen cases were reported by Durham in 1928 and were added to the eleven cases previously reported by Thibierge and Weissenbach in 1911. This case which I am reporting is the first of its kind to come under my service.

CLINICAL PICTURE

This clinical picture of this combination of diseases is as follows: Hard sclerotic atropic skin; claw-like hands with very limited motion; distorted expression around the mouth, causing difficulty in eating. Associated with this are deposits here and there in the shape of nodules or plaques. Some of these are superficial and more or less soft while others are deeper. The skin over these plaques and nodules is pink. These deposits are located at points of pressure, such as elbows, knees, thumbs and buttocks. Also along prominent bony ridges.



Fig. 1. Showing subcutaneous calcium tumors and effects of Scleroderma around mouth and forearms.

CHEMICAL EXAMINATION OF TUMORS

In the majority of cases of calcinosis the chemical examination of the nodules or plaques has revealed calcium phosphate almost exclusively.

BLOOD CHEMISTRY

In most cases of calcinosis the examination of the blood shows a normal amount of calcium but in cases in which an extensive resorption of bone takes place, an excessive amount of calcium in the blood is to be expected.

CASE REPORT

Mrs. B. H., white, American, aged 61, came to the University of Iowa Dermatological Clinic about January 20, 1931, with the following symptoms: Stiffness of hands and wrists and inability to use hands except in a very limited sense. Fingers and thumbs were drawn and had the appearance of claws. The skin on the hands was hard, sclerotic, and lardaceous in color. The outer borders of the arms were pink in color and sclerotic with atropic changes of underlying tissues. Some distortion of facial expression was evident. The mouth was puckered and the patient experienced some difficulty in eating. Depositions were in evidence along points of pressure and on bony ridges. Subcutaneous tumors were present on right cheek, both elbows, outer forearm, knuckles of left hand and on right thumb. (Fig. 1.) These tumors varied in size from a small

pea to the size of a hickory nut. Some of them were hard, others were soft. Their color was ivory. Other tumors were found on both knees. (Fig. 2.) These were much larger than those on the face and arms.



Fig. 2. Calcium depositations on knees.

History: The patient had scarlet fever and small pox during childhood. At the age of eleven had rheumatism. Seven years ago this disease process began insidiously making its appearance first on the hands and was slowly progressive to the forearms. This resulted in symmetrical diffused scleroderma which was followed by atrophic changes in the skin and underlying tissues. About five years ago the tumors began to make their appearance upon thumbs and knuckles. Later they appeared in other places.



Fig. 3 Calcium deposits in the soft tissues of the hand.



Fig. 4. Calcium deposits along bony ridges of forearms.

Chemical Examination: The whitish material of one of the tumors was examined chemically and was shown to contain calcium phosphate. The chemical examination of the blood showed uric acid 4.0; urea nitrogen 9.8; creatinine 1.0; calcium 8.4; phosphorus



Fig. 5. Calcium deposits in the soft tissues of the great toe.



Fig. 6. Showing calcium deposits in soft tissue, in buttoeks and outer thigh.

3.8. Wassermann negative. Blood count essentially negative. Urinalysis: specific gravity 1020; reaction acid; no albumin; no sugar; Myers negative.

Roentgen Examination: Films of the forearms and hands show a generalized loss of calcium content though there is no definite osseous pathology. Scattered throughout the soft tissue of the hands and forearms are numerous small nodes containing a considerable amount of calcium. (Figs. 3 and 4.) The films of the knees, feet and pelvis show an accumulation of calcium depositions in the soft tissues, particularly in the region of the origin of insertion of muscles and tendons. (For examples see Figs. 5 and 6.) These depositions are similar to those found in the hands and forearms.

SUMMARY AND CONCLUSION

I have described a case of calcinosis in a woman of 61 years of age with metastatic tumors in the subcutaneous tissues of the hands, arms, face and knees with symmetrical scleroderma. History showed rheumatism in childhood. This case is one of symmetrical scleroderma associated with metastatic calcinosis. I am unable to say what effect the rheumatism has had on the metabolic changes.

POSTGRADUATE COURSE IN HEART AND LUNGS

June 2, 3, 4 and 5, the annual postgraduate course in diseases of the heart and lungs, conducted under the auspices of the Iowa Heart Association, the Iowa Tuberculosis Association, the Extension Division of the University and the College of Medicine, will be given at Iowa City. The postgraduate course in surgery, which has usually been given in connection with the heart and lung course, will be presented next fall and an announcement made later. The schedule is as follows:

Tuesday, June 2nd
8:30—Ward walks in two sections. Department of Internal Medicine.
10:00—Clinic: Rheumatic fever. Acute and subacute cardiac infections, Dr. Wilson.
12:00—Luncheon.
7:30—Address, The Diagnosis of Cardiac Disease," Dr. Wilson.

Wednesday, June 3rd
8:30—Ward walks (sections). Department of Internal Medicine.
10:00—Clinic: Chronic valvular heart disease, Dr. Wilson.
12:00—Luncheon.
6:00—Dinner with the Johnson County Medical Society, American Legion Building.
7:30—Address, Dr. A. W. Adson.

Thursday, June 4th
8:30—Ward walks (sections). Department of Internal Medicine.
10:00—Clinic: Arteriosclerotic forms of cardiac disease, Dr. Smith.
12:00—Luncheon.
7:30—Address, "Treatment of Cardiac Failure," Dr. Smith.

Friday, June 5th
8:30—Ward walks (sections). Department of Internal Medicine.
10:00—Clinic: Arteriosclerotic form of cardiac disease, Dr. Smith.
12:00—Luncheon.

Those who will act as guest teachers are:

Dr. Frank N. Wilson, professor of medicine, University of Michigan, Ann Arbor, Michigan; Dr. C. O. Giese, Colorado School of Tuberculosis, medical director, Printers Home; Dr. H. V. Scarborough, superintendent, Sunnyside Sanatorium, Oaklandon, Indiana; Dr. C. F. Taylor, superintendent, State Sanatorium for Tuberculosis, Norton, Kansas; Dr. W. H. Watterson, chief of tuberculosis staff, U. S. V. B., Hines, Illinois.

For this course, which is opened only to registered physicians of Iowa, the registration fee is $10, and only twenty-five applicants will be accepted. A detailed announcement is being mailed to each member of the Iowa State Medical Society.

PROFESSIONAL ASSOCIATES INCORPORATED APPROVED BY COMMITTEE

A fourth agency, Professional Associates, Incorporated, of Des Moines, has been approved by the Medical Economics Committee and its initial announcement appears on the back cover of this issue of the Journal. While this organization was approved because its service would assist physicians in their collection problems, yet it is described as "not a collection service, but a system of professional acceptances which permits patients to secure needed medical services and at the same time supplies immediate cash to the physician."

THE SIGHT-SAVING REVIEW

In March of this year the first issue of a new quarterly magazine, sponsored by the National Society for the Prevention of Blindness, was received. This magazine is designed specifically to meet the needs of state and local workers for the prevention of blindness, educators, illuminating engineers, school physicians and nurses, safety engineers, public health administrators, industrial physicians and nurses, sight-saving class teachers and supervisors, ophthalmologists, and anyone interested in the sociologic aspects of saving sight.

The first volume is a book of some eighty pages, presenting papers of much general scientific interest. Perhaps the outstanding article of the issue is one entitled, "Conservation of Eyesight, with Especial Reference to Glaucoma," by George S. Derby, M.D.

It is hoped and believed that this new publication will prove to be a very effective instrument in the furtherance of interest in this relief organization.

STATE HEALTH COMMISSIONER'S PAGE

J. C. Stiles Smith, M.D.

The diseases most prevalent during the month of March were scarlet fever, chickenpox, smallpox, mumps, whooping cough and measles in the order named.

SCARLET FEVER

Four hundred ninety-two cases of this disease were reported in March which is 86 cases more than were reported for the same month of 1930. During the first three months of 1931, 1,587 cases of scarlet fever have been reported. This number is the highest for like periods of any years since 1924 with the exception of that for 1929 during which 2,085 were reported. The last figure is 500 larger than the number for the present quarter and if the indicated incidence obtains throughout the year the total number will probably approximate that for the highest year since 1924 (1929) which saw 4,315 cases reported. During that year 58 deaths from scarlet fever occurred which gave a case fatality rate of 1.3. During 1930, 62 deaths occurred among the 836 cases reported which gave a case fatality rate of 2.1. Can this be taken as an indication that scarlet fever is becoming more virulent? At least it should indicate that the quarantine provisions should be strictly enforced by health authorities. The minimum quarantine period for scarlet fever is 28 days. Aside from breaking the rule as promulgated by this department health authorities will be in error if they allow cases of scarlet fever, however mild they may apparently be, to be released from quarantine in less than 28 days, for more than three-fourths of the children with scarlet fever infection continue to be infective as long as four weeks and sometimes even longer. These convalescent carriers if not under restriction, together with those whose cases are so light that they are not seen by a physician are the ones who are responsible for the spread of scarlet fever. Attending physicians should be slow to diagnose "glandular fever," "Duke's disease," "three-day measles," in their patients when they have knowledge that scarlet fever is present in their communities. The mildness of a case of scarlet fever apparently has little or no effect upon infectivity or complications, otitis media and cervical glands being frequent sequelae of apparently light cases of scarlet fever. Nephritis follows such cases not infrequently, sometimes leaving the patient with a chronic kidney condition.

CHICKENPOX

During the month 471 cases of chickenpox were reported. Smallpox is easily mistaken for chickenpox in unvaccinated adults and attending physicians should hesitate to make a diagnosis of chickenpox. During the first three months of this year a total of 1,120 cases of chickenpox has been reported which is more than has been reported during any year since 1924 and is 342 more than for the next highest year (1928).

SMALLPOX

The number of cases of smallpox reported for the month was 335. The total number for the first three months was 800. For the same period 1930, 1,263 cases were reported which was the largest number for a similar period in any year since 1924. However, during 1930, 3,044 cases were reported, five of which terminated fatally. This gives a case fatality rate of 0.16.

MUMPS AND WHOOPING COUGH

While these diseases are classed among the "most prevalent" only 158 cases of mumps and 85 cases of whooping cough were reported. The number of cases of whooping cough reported was less than for the first quarter of 1930, the total for the present quarter being 193 compared with 250 for a similar period in 1930. Ninety-one deaths resulted from infection with whooping cough among 674 cases in 1930 and 109 deaths occurred among 1,467 cases in 1929. The case fatality rate for 1930 was 13.2 which is six times the case fatality rate for scarlet fever.

DIPHTHERIA

Only 25 cases of diphtheria were reported during the month of March. The total number of cases for diphtheria reported for the quarter is 105 which is 38 cases less than for the similar period

(Continued on page 259)

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THE FULL TIME COUNTY HEALTH UNIT

The plan of the Full Time County Health Unit was originated in Yakima County, Washington in 1911, by public health leaders in their effort to bring about an adequate health service within the homes and schools of rural communities. Today the Full Time County Health Unit is universally recognized as founded on sound fundamental principles of successful public health administration. It has proved an efficient and economical organization for the performance of all public health activities in rural communities. The plan provides that the health unit be an integral part of the local governmental body. It serves a unit population sufficiently large to provide adequate funds for its maintenance and to make public health measures effective. Its activities are carried on by personnel especially trained in public health, all of whom devote their entire time to the work under the direct guidance of a physician.

A few of the many services on the program of the county health unit are: Protect the water, milk and food supplies in such a manner that they will not carry disease, enforce the necessary measures for the proper disposal of sewage and other human waste, control communicable diseases, such as diphtheria, smallpox, typhoid and the other acute infections by means of quarantine, disinfection and promotion of immunization and vaccination. Also the hygiene of maternity and childhood receives attention commensurate with its importance and programs are inaugurated for the control of such diseases as tuberculosis and the venereal diseases.

The number of the personnel and the cost of the Full Time County Health Unit varies with the area and population of the county, together with the willingness of the people to provide themselves with adequate health service. As a general rule, however, three professional groups form the basic organization, namely—the physician, public health nurse, and sanitary inspector. This basic organization may be expanded by the addition of persons belonging to one or more of these professional groups. In some of the larger counties provision is made in the budget for a laboratory technician. The cost of the unit averages approximately 50 cents per capita. As health business applies to all the people, it is only logical that it be supported largely by funds obtained by equitable taxation of the people. The county, however, is often assisted in its financial burden by funds from unofficial health agencies such as local Tuberculosis Societies, Red Cross, Community Chests, Rockefeller Foundation, and official agencies as the State Department of Health and the United States Public Health Service.

The Full Time County Health Unit Plan is particularly applicable to Iowa. The 1930 census reveals that seventy per cent of the total population of the state resides in strictly rural communities or cities of less than 10,000 population.

However, before Full Time County Health Units could be established in Iowa, a local governmental obstacle had to be overcome. Iowa was settled and developed on a township basis. The statutes of the state provide that the trustees of each township shall make up the local Board of Health. This Board of Health is held responsible for meeting public health needs of the township. The county, as a whole, had no legal jurisdiction over its health matters. Legislation was needed to give the county officials the authority to assume the responsibility of meeting county health problems and to provide an organization for this work.

In 1928 the State Department of Health, together with the active and influential cooperation of the Iowa State Medical Society, began an educational campaign to overcome by legislation this local governmental obstacle. In 1929 the 43rd General Assembly enacted what is known as the Permissive County Health Law. This Law, Chapter 65, 43rd General Assembly, provides:

1. That the County Board of Supervisors of any county by their own resolution or by mutual agreement may adopt the County Health Unit Plan.

2. That the County Board of Supervisors shall appoint a county board of health of not more than eleven members; three of said board shall be members of the local County Medical Society and the others may be representatives of local boards

Editor's Note: This article has been prepared by E. R. Coffey, M.D., Director of the Division of Cooperative Health Work of the Iowa State Department of Health.

of health of incorporated cities, or towns situated within the county.

3. That the County Board of Health shall direct all public health activities within such county and,

4. That the expense incurred by the county health unit shall be paid by the county board of supervisors. Other organizations, including local Board or Boards of Health, may unite with the County Board of Supervisors in defraying the necessary expense of such County Health Unit.

With the enactment of this Law, the State Department of Health in cooperation with the United States Public Health Service, inaugurated an intensive state-wide campaign for the purpose of bringing the plan of the County Health Unit to the attention of local medical societies, county officials and others interested in public health. To add impetus to this campaign, the United States Public Health Service in June, 1930, detailed one of their personnel to the State Department of Health for this work. In addition the United States Public Health Service and the Rockefeller Foundation have allotted certain funds to be used in aiding the counties in meeting the additional financial burden of maintaining the County Health Unit.

During 1930 four counties in Iowa, namely—Washington, Woodbury, Des Moines and Delaware, adopted the Full Time County Health Unit Plan. The first three mentioned counties have provided for adequate personnel to meet the needs of the county. Delaware County has provided the services of a public health nurse.

Over ninety-six per cent of the rural population is as yet unprovided with adequate official local public health service. This deficiency occasions a continued sacrifice of the health and lives and the material resources of many Iowa citizens. A sacrifice which is needless because preventable. Preventable by measures readily within the means of the county to provide. The situation is practical and urgent. It should be dealt with intelligently and promptly.

ARE WE FACING SOCIAL CONTROL OF SICKNESS TREATMENT

Call it "Sickness" or "Health Insurance," the "Panel System," or "State Medicine," no legislation has so greatly affected so many people as that for the social control of the treatment of disease. No section has been so deeply affected as the different branches of the professions dealing with the treatment of disease. This applies almost equally to physicians, dentists, nurses, and to nearly all the institutions concerned with human ills.

These various divisions of the *medical profession* must suffer or profit together from the workings of such legislation. It is impossible to separate their fates, even in discussion, and certainly not in programs of action. To emphasize this solidarity the words *"medical profession"* are used to include all those so affected.

Since Bismarck compelled the enactment of the first compulsory social insurance laws in 1883, similar laws have been enacted in practically every European nation, in Japan and several South American countries, and are under favorable consideration in nearly all other countries, including Canada, Australia and South Africa.

The International Labor Conference, which includes every nation belonging to the League of Nations, at its meeting in 1927, adopted an agreement binding all members to introduce *compulsory* sickness insurance as soon as possible.

While much is made of the distinction between *"compulsory"* and *"voluntary"* systems, there are few of the latter without many compulsory features. The difference in degree is so slight that it is hard to draw the line between them, especially as the voluntary systems are constantly adding compulsory features.

In the United States, workmen's compensation laws have already given us a system of compulsory accident insurance in all but four states, while a constantly increasing number of states are extending these laws to cover "occupational diseases." Many features of compulsory insurance treatment have also been included in recent veterans' legislation.

The tendency of such legislation was foreseen by the American Medical Association almost as soon as it began. A report of the Judicial Committee of that Association, which was adopted by the House of Delegates at the San Francisco meeting in June, 1915, made this remarkable analysis and forecast:

The passing of these laws does not mean that some new or special law has been passed to compensate an injured workman under the old common law system, but it means an entirely new legal and social conception of compensation for injury and is, in fact, the beginning of a new social and economic condition in this country.

* * * * *

The Council further realizes that in the near future the majority of medical men in this country must face a new social condition in connection with the laws of workmen's compensation in accident and probably in disease. In whatever country the social equilibrium has been upset by new laws on compensation, there have followed in the wake of compen-

Editor's Note: The above is an editorial prepared by a Committee on the Study of Dental Practice of the American Dental Association indicating the close relationship of dental and medical practice and problems.

sation for accidents other insurances tending toward the complete insurance systems of England and Germany.

All forms of insurance tend to expand to cover new classes, to give more generous compensation and to extend any service once offered. In Germany this tendency has reached a point where but five per cent of the *medical profession* is engaged in private practice. This percentage is higher in other countries having sickness insurance, but in few does it reach fifty per cent.

This matter falls within the jurisdiction of state legislatures. There are forty-eight of these and it will be a miracle if some do not soon make the experiment, especially in time of industrial depression, which always produces social legislation.

Such a change would deeply affect the income, professional standards, methods of work, freedom of practice, all relations with patients and nearly every other feature of the lives of all physicians and dentists, whether they came directly under the operation of the law or not. There is hot dispute as to the nature of these effects. Opponents declare that such legislation degrades the entire healing profession, encourages malingering, reduces incomes, leads to superficial, stereotyped treatment after hasty diagnosis, introduces lay control of professional matters and generally demoralizes all relations with the patient. Advocates urge that it brings increased income, especially to the beginning practitioner, that it brings medical care within the reach of large masses hitherto excluded, makes early diagnosis universally possible, and leads to general betterment of health conditions.

Part of this disagreement is due to the multitude of insurance systems. These differ, not only as to countries, but every system changes constantly and produces different results at different times. In planning a program in relation to such legislation it is of paramount importance to know whether a certain good or evil result is inherent in the insurance system, or is peculiar to certain times and places. It is also important to know whether the good results can be obtained by other means and, especially, whether, if insurance is pressed upon this country, it is possible for an organized *medical profession* to secure such provisions as will avoid its evils.

It is to obtain the information that will help the entire *medical profession* to meet this possible threat in such a way as to utilize any action that may result to the best interests of the public and the profession that the Committee on the Study of Dental Practice of the American Dental Association is conducting a study of all phases of sickness insurance in Europe and America. As fast as the results of that study are available they will be placed before the members of the American Dental Association, and will be available at any time in the future when such legislative proposals are under consideration.

OPPOSITION TO CATTLE TESTING TRIVIAL

According to the records of the United States Department of Agriculture 1,325,912 cattle were tuberculin tested throughout the United States during the month of March. This is the largest number of cattle ever tested in any one month since the nation-wide cooperative campaign to eradicate tuberculosis in cattle began about twelve years ago. These same records indicate that during the month of March, 1931, 206,822 cattle were tested in Iowa, the greatest number in any state in that month. Wisconsin ranked second with 155,152 tests and Minnesota third with 116,540 tests.

The department bulletin further indicates "there have been many demands from cattle owners in this territory to submit their herds to the tuberculin test."

During the period covered by this federal report the Iowa Legislature passed a compulsory tuberculin test law, which brought forth a storm of disapproval and near revolt in the farm section surrounding Tipton. It appeared at one time that state authorities would be required to enforce the law with military aid. Fortunately the crisis passed without this drastic measure and sentiment appears to be swinging in favor of the new law.

It is interesting to note that while adverse sentiment ran high in Cedar county, in the adjoining county of Johnson the farmers had affirmed and upheld the testing of cattle for tuberculosis since 1928. In November of that year a referendum to place Johnson county in the tuberculosis eradication area carried by a good majority and has been operative since. It is further interesting to note that in fifty-nine counties testing has been completed and accredited under state and federal laws while in all of the remaining counties of the state, save one, testing has been partly completed. These data would indicate that while a small group of cattle owners in and around Tipton made an heroic demonstration that this demonstration did not reflect the attitude of the agricultural masses throughout the state. It would appear that in most localities the farmers are as acutely interested in the control of the spread of tuberculosis as the city dwellers and that they have not only cooperated but actually invited this work. Certainly the lay press has in many instances unjustly criticized the cattle owners of Iowa because of the

stand taken by a group of farmers in Cedar county.

Dr. E. A. Wright, head of the tuberculosis eradication of the state agricultural department, is quoted as placing the blame for the Cedar county uprising at the door of Norman Baker, owner and operator of the Muscatine Cancer Hospital. He is quoted as having said, "Baker has been propagandizing on this thing for a year or more and he has a small section of Iowa aroused through misrepresentation. His campaign of misinformation is the only thing which could have led the people there to have such a misconception of our work."

Science has conclusively demonstrated that human beings may contract tuberculosis from animals contaminated with this disease. Science has further developed a test which in most instances positively indicates the presence of active lesions in animals, a test which is simply performed and in no way endangers healthy animals upon which it is used. Under the salvage plan cattle owners bear but a small part of the loss resulting from the cattle condemned since federal and state further make up two-thirds of the difference between the appraisal price and the salvage price. In terms of health to citizens of the state, this amount is small, indeed, and should not become a hardship in the instances where the law is effective.

Bovine tuberculosis spreads from cattle to humans in a sufficient number of cases to materially affect mortality figures to say nothing of the thousands of children who are crippled, maimed and incapacitated each year. Certainly a factor which so vitally affects human health and happiness is one of paramount importance and one justifying every effort for its control and suppression.

THE WOMAN'S AUXILIARY TO THE A. M. A.
3. SOUTHERN DISTRICT

The third or Southern District of the Woman's Auxiliary to the A. M. A. may not have moved so rapidly as regards the number of auxiliaries organized as the other sections but the quality of those existing have proved them to be of the greatest value in promoting the aims of the national body.

Alabama reported three counties organized last year, and is particularly interested in a health program giving especial attention to children with a tuberculous condition. The group visited in Birmingham were alive and interested, and had the cooperation of their Medical Society.

Arkansas reported thirteen counties organized, all giving attention to a health program and trying to raise an adequate loan fund for medical students only. Some of the counties contributed obstetrical kits for use in the rural districts. Many of the Auxiliary members in Arkansas are devoting much time and energy to the Parent-Teacher work and are aiding in the various civic and welfare organizations. All will be gratified when the state is organized 100 per cent.

Florida, large areas of which are sparsely settled, has ten auxiliaries. Some of these are composed of a combination of two or more counties. Proof of the quality of these groups was seen when a large medical organization and its auxiliary were entertained in Miami in 1929. Mrs. J. Ralston Wells, the little woman who now heads the State Auxiliary, furnishes further proof of their aliveness and interest. Florida with her marvelous fruits, flowers, vegetables and her wonderful sunshine has just as wonderful and marvelous women in her medical auxiliary.

Georgia, which has given to A. M. A. Auxiliary one of its most efficient presidents, Mrs. Allen H. Bunce, has more counties than any other state of its size and has twenty-one of these organized for auxiliary. They have the full approval and cooperation of the State Medical Association, and having attended their state convention in 1929, the writer will vouch for the fact that no national meeting is more replete with interest and enthusiasm than was found in Georgia, nor have we found anywhere a greater desire to foster the aims and purposes of the national body. No group of women can possibly have greater courtesy, interest and encouragement shown them and their work than is given to the Georgia Auxiliary by the medical men. Mrs. Harrold will bring from her state a goodly report.

Louisiana reports only two parishes organized. Taking into consideration the fact that one of these two auxiliaries has a greater enrollment than have some whole states makes us feel that Louisiana will not be far behind in the number of parishes when her final report of accounting comes in. She is not lacking in interest in any direction because the president of the State Auxiliary, Mrs. Harrold, is of the type who says "We will!"

Mississippi reported four auxiliaries last year, and again we are able to speak with assurance of our expectations from this state. The president of the State Auxiliary attended the meeting in Detroit and returned to her state carrying with her additional enthusiasm and determination to gather into the fold more county organizations. This

Editor's Note: This is the third of a series of four articles to be presented by the Committee on Publicity of the Woman's Auxiliary giving a general survey of their organizational work. This installment was prepared by Mrs. C. W. Garrison, organizing chairman for the Southern District, of the Woman's Auxiliary.

dream will come true. Mrs. Polk was the first to respond to our first circular letter. She has the approval and encouragement of the medical men of her state to go forward.

We may expect to hear of more interest, as well as more auxiliaries in North Carolina. Mrs. W. B. Murphy is the president of this great state, and though we have before us no report for last year, we do know of their interest in the past and believe we may hear the number five at least doubled in their next report.

South Carolina shows thirteen counties organized, and Mrs. Mauldin was prompt to reply with assurances that better things are ahead for next year.

Mrs. L. M. Sackett now leads the one auxiliary reported from Oklahoma, and we feel certain that others will be added before June.

On invitation from its president we had the pleasure of meeting with the Davidson County Auxiliary in Tennessee early in October, and found a splendid group of women earnestly desiring to serve in the most useful way. We found as a member of this Auxiliary the State President, Mrs. Milton S. Lewis. While only four auxiliaries are reported from Tennessee, they are the counties in which the largest cities are located. The distances are great between, but with the known interest and enthusiasm of the two counties visited, Davidson and Shelby, we are assured that Tennessee will bring to the next national meeting a report filled with accomplishments which tend to fulfill the aims and purposes of the auxiliary.

While we were not fortunate enough to meet with the Texas Auxiliary, we did have a little visit with the energetic and charming President, Mrs. O. M. Marchman. Texas, the mother state of the Medical Auxiliary as it is now organized, has thirty-five county auxiliaries, and with a live, interested organization chairman such as Mrs. J. T. Moore is proving herself to be, others will be added before the next state meeting in May. Texas Auxiliaries have earnestly promoted a health program, always working shoulder to shoulder with the fine progressive men of the Medical Association who, in turn, endorse the auxiliary movement, and are unstinted in encouragement to further development of the organization.

At this time the minds of the Third District are directed towards the Keystone State and the City of Brotherly Love, and many are hoping to be wending their way to Philadelphia in early June that they may partake of the feast of inspiration and absorb the spirit of auxiliary. Pennsylvania and her neighboring states have grown so marvelously that all are now anxious to sit at their feet and learn. This, the third district, is anxious to contribute its quota of honor paid to the medical men in whose interest we serve, and so it is with high anticipation that all plans are being made to be present at the annual meeting of the A. M. A. June 8-12, 1931.

THE WOMAN'S AUXILIARY WILL ENTERTAIN AT PHILADELPHIA

Th Woman's Auxiliary to the American Medical Association has been placed in charge of all entertainment of women visitors, and began its labors on June 27, 1930, by engaging the whole Roof Garden of the Bellevue-Stratford Hotel for the period of the convention. All women's activities will center in this hotel—registration, meetings, luncheons and supper dance, and all excursions will start from the Broad Street entrance. Invitations and tickets must all be procured in the Roof Garden *in advance*, as nothing but programs will be obtainable elsewhere. Members of the A. M. A. are invited to join all excursions, and should register for them in advance in the Roof Garden. Rooms for State Headquarters have also been reserved in the hotel, and sponsors will be appointed to look after all women registered from their own states. The list of sponsors will be printed in the program. We take this opportunity to thank the management of the Bellevue for their generosity in placing all these facilities at our disposal free of charge. The chairman of the Women's Hotel Committee is Mrs. Frederick S. Baldi, 2117 Porter Street, Philadelphia, who will be glad to make any desired reservations.

The convention will open with a subscription buffet luncheon in honor of all National Auxiliary Presidents from Mrs. Red to Mrs. McGlothlan, immediately followed by three round tables of 35 minutes each, with ten-minute intermissions, each under expert leadership. The subjects will be:

1. Programs for County Auxiliary Meetings.
2. The Technic and Value of a Committee on Public Relations.
3. History and Archives.

These informal gatherings will be a sort of preliminary canter, designed to bring together those interested in special phases of auxiliary work and give them opportunity to discuss the subject thoroughly during the following days. The National Board dinner and pre-convention meeting are scheduled for Monday evening.

A new and, we hope, helpful feature will be a Question and Suggestion Box to which we beg all with good ideas to contribute. This seems the most practical way of finding out what our members want continued, what discarded, and what plans are indicated for the future.

The regular business sessions will be held on Tuesday and Wednesday mornings. National chairmen will be allowed ten minutes for their reports, state presidents three minutes. Reports to be printed may be as long as desired (in reason), but let no one reporting on the floor imagine these limits an idle

jest. Nor will the hours announced on the program be found to mean "about." Have your watches cleaned and regulated, and practice your wrist drill before leaving home. You will need it.

Thursday morning, too, will be a busy one; the post-convention board meeting, a special meeting for state and county treasurers desiring further elucidation of the treasurers' receipt blanks, and at 10:30 an informal round table presided over by the new president, the subject, "What Have I Gotten Out of the Convention?" At this meeting Mrs. McGlothlan will announce her committee chairmen and outline her plans for the coming year, and the subjects in the Question Box will be discussed, a sort of stock taking, closing the year's business and opening the new books.

Philadelphia as a historical and cultural center is the keynote of the entertainment planned for our guests. Except Monday, all afternoons and evenings will be devoted to pleasure, and a variety of excursions is offered to suit all tastes, all physiques, and all weathers. They include bus trips to Valley Forge and to Longwood, the beautiful estate of Mr. and Mrs. Pierre S. du Pont, a boat trip on the Delaware, and visits to the Fairmount and Rodin Museums and to the Historical Society of Pennsylvania. The Museum authorities are delighted to provide docent service for those desirous of more than a passing glance at their treasures, and the Historical Society will arrange a special exhibition for the week, including portraits, prints, and engravings, documents, silver, etc., from its unsurpassed collection of Americana. There will also be a brief historical address by Dr. Charles W. Burr of Philadelphia.

Wednesday will be a field day,—the big Auxiliary luncheon, with guests and speakers from the A. M. A. and a beautiful musical program, the gift of the Delaware Auxiliary. In the afternoon the Philadelphia County Medical Society invites the women to be their guests on a bus trip through historic Philadelphia (a ten-minute stop at Independence Hall), Fairmount Park and Germantown to "Stenton," where the New Jersey Auxiliary invites us all to tea. "Stenton," the home of James Logan, Penn's friend, Secretary of the Colony, still stands just as it was built in 1728, the furniture of the period, the garden laid out as described by contemporaries. On Wednesday evening the Pennsylvania Auxiliary invites all visiting ladies to a reception in the superb Chinese Rotunda of the University Museum, a setting probably unsurpassed in any museum anywhere.

This meeting of the A. M. A. in Philadelphia is the first in thirty years, and the County Medical Society, desiring to mark so auspicious an occasion, and also in appreciation of the work of the Auxiliary, invites all members of the A. M. A. and the visiting ladies to be their guests at a supper dance in the Ball Room of the Bellevue, following the big meeting of the A. M. A. on Tuesday evening at the Academy of Music. The President's Ball at the Benjamin Franklin Hotel on Thursday evening, to which all are invited, will close the formal festivities.

To those still able to rise from their beds on Friday morning there is offered a tour of Wanamaker's with luncheon in the Crystal Tea Room, or an all-day bus trip to Atlantic City, where the New Jersey Auxiliary will meet them for luncheon at the Claridge. This program includes also a visit to the new Convention Hall, an hour in a chair on the Boardwalk and plenty of time for window shopping or a swim.

And finally, every day and all day there will be a booth in the Roof Garden inscribed, "As You Like It"—Anywhere, where those wishing to golf, shop, go to Garden Days, or carry out any other pet project not elsewhere provided for may find information and assistance in making a profitable use of their opportunity.

Will you not reward our efforts by the largest and most enthusiastic women's attendance in the history of the American Medical Association?

CONFERENCE ON CHILD DEVELOPMENT AND PARENT EDUCATION

The fifth annual Iowa State Conference on Child Development and Parent Education will convene at Iowa City, Iowa, on Tuesday, Wednesday, and Thursday, June 16, 17 and 18, 1931, under the auspices of the Iowa Council for Child Study and Parent Education. Iowa State Teachers College, the Extension Divisions of Iowa State College and the State University of Iowa, and the Iowa Child Welfare Research Station cooperate in the meetings.

At the 1930 conference 520 people from seventy-seven municipalities in Iowa, twenty-five states and Canada, registered. The fields of medicine, nursing, social work, dietetics, teaching, school administration, parent education, athletics, probation work, as well as the undergraduate and graduate students of the University were represented. Parents in attendance represented a total of 588 children.

The conference is open to all who desire to come. Interested parents throughout the state are especially welcome.

Speakers of the conference will include:

Dr. Ada Hart Arlitt, Professor and Head of the Department of Child Care and Training, University of Cincinnati, Cincinnati, Ohio.

Dr. William E. Blatz, Associate Professor of Psychology, University of Toronto, Director of the St. George's School for Child Study, and member of the Research Staff of the Canadian National Committee for Mental Hygiene.

Dr. Paul Hanly Furfey, Instructor, Department of Sociology, Catholic University of America, Washington, D. C.

Dr. Richard E. Scammon, Dean of the School of Physical Sciences, University of Chicago, Chicago, Illinois.

This year an unusual opportunity will be offered for members of the conference to become familiar with ideas of the principal lecturers. Round table discussions conducted by several of the speakers, relating to the topics presented in their lectures will be held at fixed intervals during the conference sessions. To derive full benefit from such meetings, persons attending the conference are urged to remain for the entire three days.

A registration fee of one dollar will be charged. For further information address *The Iowa Child Welfare Research Station*, State University of Iowa, East Hall, Iowa City, Iowa.

IOWA HEART ASSOCIATION HOLDS ANNUAL MEETING

The annual meeting of the Iowa Heart Association will be held in the Oak Room of the Hotel Fort Des Moines, Friday, May 15, 1931. President Daniel J. Glomset will preside at the twelve-thirty luncheon, after which the following program will be presented: Address on the Scope and Purposes of the Iowa Heart Association, Daniel J. Glomset, M.D., Des Moines; and Some Unusual Phases of Coronary Disease, Campbell P. Howard, M.D., Montreal, Canada. A business meeting, during which officers will be elected will close the session.

CHEST CLINICS HELD

The Speakers Bureau of the Iowa State Medical Society in cooperation with the Iowa Tuberculosis Association has held heart and chest clinics in the following places: Friday, April 10, Humboldt County at Ottosen; Thursday, April 16, Dallas-Guthrie County at Panora; Friday, April 24, Greene County at Jefferson. Drs. John H. Peck and Daniel J. Glomset, both of Des Moines, were in charge of the clinics. The following clinics have been scheduled: Friday, May 1, Mahaska County at Oskaloosa; Friday, May 8, Page County at Shenandoah; Friday, May 22, Taylor County at Bedford; Friday, May 29, Benton County at Vinton; Thursday, June 11, Buchanan County at Independence; Friday, June 19, Adair County at Greenfield; Friday, June 26, Union County at Creston.

STATE HEALTH COMMISSIONER

(Continued from page 252)

for 1930. Forty-four deaths from this disease occurred in 1930 among 412 reported cases giving a fatality rate of 10.9 which gives a ratio of one death for every 10 cases, whereas the average for the country is one death for every 15 cases. The reduction in cases and deaths from diphtheria has been decisive and continuous since 1923. A large part of this decline is doubtless due to the statewide campaign for immunization against diphtheria. During 1930, 10 cities of the first class in Iowa reported no deaths from this disease, 3 of these cities reported no cases and no deaths, 8 such cities had rates higher than the state rate (1.8) although their rates were much less than those of previous years, e.g., one city had a reduction in rates from 21.7 in 1926 and 14.4 in 1927 to 4.8 in 1930.

The average mortality rate for cities of the first class in 1930 was 2.7, for cities of the second class 1.06 and for those of the third class 0.84. The records of the three first class cities reporting no cases and no deaths would seem to say in no uncertain terms that children need not have diphtheria.

TYPHOID FEVER

Four cases of typhoid fever were reported for the month making a total for the first quarter of seven cases. This is the smallest number of cases reported since 1924 with the exception of 1925 during the first quarter of which six cases were reported. In 1930, 40 deaths occuring among 107 reported cases gave a case fatality rate of 37.3. The number of deaths in that year (40) is less by 12 cases than have been reported during any year since 1924. The department recommends vaccination against typhoid fever to all persons whose business or pleasure causes or permits them to travel away from home. Vaccination is especially recommended to those who are planning to attend summer camps.

FIELD TRIPS

Three field trips were made by the epidemiologist: two for diphtheria and one for scarlet fever.

THE AMERICAN PROCTOLOGIC SOCIETY MEETS IN PHILADELPHIA

The American Proctologic Society, organized in 1899 for the purpose of "investigating and disseminating knowledge relating to the rectum, anus, and colon," has announced its annual meeting for Sunday, Monday, and Tuesday, June 7, 8, and 9, with headquarters at the Bellevue-Stratford Hotel, Philadelphia.

While this society is one with a definitely limited membership, an invitation is extended to all regular practitioners (members of the American Medical Association, and not affiliated with medical groups admitting those not members of the A. M. A.) to attend this thirty-second annual meeting. Physicians fulfilling these requirements, who are especially interested in proctology are eligible to submit applications for associate membership after attending at least one meeting of the society, and one A. M. A. section meeting.

Additional information relative to the program offered may be secured by addressing the Secretary, Curtis Rosser, M.D., 710 Medical Arts Building, Dallas, Texas.

SPEAKERS BUREAU ACTIVITIES

Community Health Day

The chest clinic that was recently held at Ottosen deserves special mention. This was one of the regular clinics of the Iowa Tuberculosis Association, scheduled by the Speakers Bureau of the Iowa State Medical Society as a regular meeting of the Humboldt County Medical Society. Due to the excellent publicity given this meeting, the cooperation of the local health agencies, and the interest of the people, this clinic developed into a community project—which the Speakers Bureau has seen fit to designate as Community Health Day.

Twenty doctors, three public health nurses, one teacher of physical training, four Christmas seal chairmen, the president of the Humboldt chapter of American Red Cross and the chaplain of the Iowa Methodist Hospital were in attendance. In addition to the regular heart and lung clinics and scientific program, devoted to the interests of the physicians in Humboldt and surrounding counties, programs were also conducted for the laity. The schools were closed for the afternoon and all the school students from the kindergarten to the high school were called together in the high school auditorium by the school superintendent, to view an educational film on tuberculosis and to listen to health talks.

Following the afternoon clinics, the doctors, guests, and community leaders participated in a banquet prepared and served by the ladies of the community. Dr. Beam, of Rolfe, councillor of this district, presided and introduced the speakers, among whom were two ex-presidents of the Iowa State Medical Society. This meeting afforded an excellent opportunity for the profession and the laity to become better acquainted and to discuss how they could best cooperate to promote health. At the same time the medical program was being presented to the doctors, a meeting for the Parent-Teachers Association was held in the school auditorium, at which the medical speakers discussed "The Vital Pump" and "The Foe of Youth."

This community has been evincing special interest in health. During the school year the Parent-Teachers Association has made a particular study of the subject and the Red Cross took advantage of the holidays to sponsor the medical inspection of all students. These agencies and the county medical society have cooperated closely in this work and thus decided that the clinic for the county medical society might well be held for the entire county and thus serve as a fitting climax to the year's program. The Speakers Bureau was very willing to help carry out this splendid idea and sent speakers prepared to address the several meetings.

The Bureau hopes to be able to sponsor such "Community Health Day" programs in connection with the chest clinics whenever possible. Such a step can only be undertaken successfully with the cooperation of all the local health agencies, but the committee feels that if a constructive health program is to be established in the state of Iowa, it must be founded upon the proper education of the present and future citizens—a program such as that started in the Ottosen Community Health Day.

April Placements

Visiting Nurses Association, Iowa City. April 1.
Miss Alma E. Hartz, R.N., State University of Iowa, Iowa City.

Taylor County Medical Society, Bedford. April 2.
Skin Clinic—
Clinic—H. C. Willett, M.D., Des Moines.
Dermatology and Its Relationship to Systemic Conditions—George McCreight, M.D., Des Moines.

Washington County Medical Society, Washington. April 7.
Medical Aspects of Hyperthyroidism—J. L. Kestel, M.D., Waterloo.
Surgical Management of Hyperthyroidism—T. F. Thornton, M.D., Waterloo.

Parent-Teachers Association, Ames. April 7.
What the Home and the School Can Do to Keep the Child Physically Fit—D. J. Glomset, M.D., Des Moines.

Franklin County Medical Society, Hampton. April 9.
Medical Economics—
Advertising by Physicians—William Koeneman, Knoxville.
Marion County Contract—C. S. Cornell, M.D., Knoxville.
The Cults and How to Combat Them—F. M. Roberts, M.D., Knoxville.

Lyon's Club, Des Moines. April 9.
Frank A. Ely, M.D., Des Moines.

Humboldt County Medical Society, Ottosen. April 10.
Chest Clinic—
Finding the Tuberculosis Patient—John H. Peck, M.D., Des Moines.
The Rheumatic Heart—E. L. Wurtzer, M.D., Clear Lake.
The Hypertensive Heart—D. J. Glomset, M.D., Des Moines.

Parent-Teachers Association, Ottosen. April 10.
The Vital Pump—D. J. Glomset, M.D., Des Moines.
The Foe of Youth—John H. Peck, M.D., Des Moines.

Dental Society, Winterset. April 10.
Periodic Health Examinations—Granville Ryan, M.D., Des Moines.

Dallas-Guthrie Medical Society, Panora.
Chest Clinic—
The Tuberculous Patient—John H. Peck, M.D., Des Moines.
The Rheumatic Heart—D. J. Glomset, M.D., Des Moines.

Calhoun County Medical Society, Rockwell City. April 16.
Obstetrics—
Lessons Learned from One Hundred Consecutive Confinements—F. W. Rice, M.D., Des Moines.
Birth Control—E. D. Plass, M.D., State University of Iowa.

Parent-Teachers Association, Bondurant. April 17.
Pre-school Clinic—J. E. Dyson, M.D., Des Moines.

Cerro Gordo County Medical Society, Mason City. April 21.
Heart Clinic—
Treatment of Cardiac Failure—Fred Smith, M.D., Iowa City.
Rheumatic Disease—C. W. Baldridge, M.D., Iowa City.

Community Club, Melbourne. April 23.
What to Expect of Your Doctor—J. F. Edwards, M.D., Iowa State College, Ames.

Greene County Medical Society, Jefferson. April 24.
Chest Clinic—
Tuberculosis in Children—John H. Peck, M.D., Des Moines.
Treatment of Heart Disease in Children—D. J. Glomset, M.D., Des Moines.

Federated Women's Clubs, Cooper. April 24.
Heredity—W. W. Bowen, M.D., Fort Dodge.

Parent-Teachers Association, Dayton. April 28.
Our Responsibilities in the Problems of Childhood and Youth—E. N. Myers, M.D., Boone.

Legislative Obstacles in Obtaining Adequate Medical Laws

Editor's Note: The Legislative Committee reports that several members of the Forty-fourth General Assembly expressed themselves as favoring a single medical board, with a clear line of distinction between medical practitioners and drugless healers. This exposition of the Illinois single board is an extract from the paper presented by Dr. J. R. Neal, Chairman of the Legislative Committee, Illinois State Medical Society, before the 1930 Conference on Medical Education and Licensure, and printed in the Bulletin of the Federation of State Medical Boards of the United States, Volume XVI, No. 6, June, 1930.

The total number of medical voters in an average political unit is very small but if the physicians, no matter how few, will cooperate—their influence has and will continue to assert itself when the question of health is an issue.

Politicians are well aware of this situation. Politicians have a sensitive ear for any wave length that carries the joyful music of votes. They sometimes tune in on independent stations but it is usually for entertainment only, when the broadcaster is known to control a paucity of votes.

Again, medical education is ultra-conservative. Individuals are taught to shun advertising and publicity as they would a bad name. The patient must inquire into the merits and ability of a doctor and search out his office to obtain what the physician has to sell. This situation is contrary to almost every other phase of modern life. Even the churches have united in a vigorous advertising program. Every industrial and commercial enterprise teaches its personnel that the "go-getter" is the fellow who wins. Every cult and ism schools its pupils in the fine art of advertising upon which their very livelihood depends.

Thus it appears that about 99½ per cent of the population get what they acquire by going after it with blasting horns, shouting from the housetops to announce the virtues of their wares. The legislators understand that method of doing things. When the public is a bit slow in making a "drive" for what it wants or of what politicians decide is good for it, the politician goes out and organizes a demonstration to prove to the world that there is a demand for what he wishes to do. I have known a governor to direct the organization of one booster club after another which bore down upon the Capitol in specially chartered trains with banners flying and band ablast to wait upon the governor in order to persuade him to build a hard road where he wished to build it.

That situation creates a very large obstacle in the way of securing adequate medical legislation. As a general rule doctors are individualists and ultra-conservative at that. It took over 50 years for the medical profession in Illinois to get the first permanent medical practice act upon the statute books of that state although numerous attempts to that end were made during the intervening half century. Even in the Territorial days of 1817 a law creating a medical society which should be its own judge and jury and providing for the registration of vital statistics was enacted but its life was brief. Two years later, in 1819, another somewhat similar law found birth but likewise perished in infancy and the same fate overtook a third law which was passed in 1825. Subsequent attempts never succeeded in materializing into even a temporary statute until 1877 when upon one of those rare occasions the state medical society got solidly behind a program and brought it successfully through the general assembly. That law created a state board of health which kept alive the interest in the medical law from that time forward.

Appreciating these difficulties and profiting by the history of medical legislation in Illinois the state medical society here has manifested an unusual vigor and aptitude in legislative matters. Due largely to a handful of deeply interested leaders a very definite legislative program has been planned and the society has been united in its support. As a result Illinois is now one of the very few states which maintains a single board to supervise the licensure of practitioners. In 30 other states and the District of Columbia there are separate examining boards for chiropractors and other cults. The single board plan makes possible the maintenance of the highest possible standards under any existing legislative requirements while the multiple board system tends to lower the standards under the most exacting legal specifications.

It is not surprising that the legislatures in the several states find themselves in a dilemma when attempting to arrive at the proper solution of this very perplexing problem, when it is quite obvious that, without the proper advice, it would be impossible for them to create a medical law which would be the best safeguard for the citizens of the state.

We observe that a considerable number of the states are adopting the so-called "basic science" law, which we believe is fundamentally wrong. But we do see the necessity for such measures in those states, which, through their own error, have allowed a multiplicity of conflicting laws to

be enacted, with the necessary number of separate boards to administer them. The "basic science" law is so adopted as a means to an end, for it is not debatable that the licensing of any profession should be supervised by others than members of that profession. To think that the "basic science" law, which is supervised, and the examination given, by laymen, solves the problem, is as unreasonable as to expect the legal profession to permit a committee of architects or engineers to examine lawyers; and yet, there are many physicians who, without carefully studying the so-called "basic science" law, subscribe to its efficacy. This again is another legislative obstacle in the many states where there is a controversy always existing between the cultists and the regular school. There are quite a few well thinking members of the Illinois General Assembly, who believe that such a law should be enacted in that state.

We believe that the average member of the legislature is earnestly endeavoring to give support to the enactment of the proper and necessary laws, but undoubtedly propaganda from any well organized group will have its influence. The Anti-Vivisectionists are extremely active throughout the United States at this time. They come into the legislative halls with their sympathetic half-truths, and paint a picture which is most difficult to correct after a false impression has once been formed in the minds of the legislators.

It is our belief that the blame should not be laid at the door of the legislator in the majority of cases, but is distinctly a responsibility of the medical profession, which through apathy has permitted a condition to be created which tends toward the lowering of educational requirements regarding those who are seeking the privilege of treating human ailments. A restricted medical practice act which has to deal with the lower educational requirements of the cultists is not the ideal, but is far superior to a dual act and separate examining boards. Physicians, even in their own organization, at times fail to take cognizance of the fact that the legislature is a highly impressionable body, and despite the fact that the best safeguard for the people would be a single standard which all who seek the privilege of treating the sick should follow, the attitude of organized medicine is frequently misunderstood in legislative bodies, due partially at least to the unwillingness of the physician to debate the good or bad of any suggested drugless therapy; and his unwillingness to impartially discuss the situation with the lawmaker, which tends to create a doubt in the legislator's mind as to the physician's contention. And, of course, the cult exploiter takes advantage of a situation of this kind to his profit. It is a well known fact that a considerable number of intelligent people, including legislators, do at times seek the services of the cultists for minor ailments; and the physician does not show the tolerance and the effort to explain to his lawmaker patient the unfounded claims of the drugless healer, but all too frequently speaks lightly or in a vitriolic way regarding the shortcomings of the cultists. This is contrary to the manner in which a banker speaks to the physician after his ascertaining that a physician's stock investment was unwisely placed with a resultant loss. The banker is tolerant and willing to advise the physician and show him how to avoid the pitfall; but the reverse is not always true when the banker makes an error in placing his faith in some patent nostrum or is enticed into the hands of an incompetent drugless healer. Our observations would lead us to believe, therefore, that the apathy of the medical profession is largely responsible for the many incompetent laws, and that many physicians do not acquaint themselves with the very law under which they themselves are permitted to practice the healing art.

The success with which the Illinois Medical Society has carried out its legislative program in recent years; causing the defeat of several hundred bills which it deemed obnoxious and the enactment of a fairly satisfactory medical practice act in 1923, suggests that a well organized legislative program with sufficient resources to keep the profession at large informed and active in behalf of that program is one means of meeting obstacles under present conditions. Ultimate solution depends upon general education of the public along medical lines. This can be facilitated in no better way than for medical organizations to confer with public health agencies and work together in close harmony of purpose and plan. With a state health department and a state medical society going to the legislature with divergent programs is an invitation for defeat to any comprehensive medical legal code. Long ago Abraham Lincoln immortalized the Biblical admonition that a house divided against itself cannot stand and today no other expression can set forth more fully the reasons why legislators have not listened more attentively to the suggestions and advise of the medical profession.

NEW AND NON-OFFICIAL REMEDIES

Diphtheria Toxoid, fifteen (two dose) immunization treatment packages

Diphtheria Toxoid, fifteen (two dose) immunization treatment packages

Parke, Davis & Co.

Parke, Davis & Co.'s Viosterol in Oil 250 D

Parke-Davis Cod-Liver Oil with Viosterol 10 D

SOCIETY PROCEEDINGS

Calhoun County

Thursday, April 16, members of the Calhoun County Medical Society met for the regular monthly meeting in Rockwell City. After the dinner, the following scientific program was presented: Lessons Learned from One Hundred Consecutive Confinements, Floyd W. Rice, M.D., of Des Moines, and Birth Control, E. D. Plass, M.D., of Iowa City.

Cerro Gordo County

The Cerro Gordo County Medical Society held its regular meeting with a heart clinic in the afternoon of April 12, 1931. Fred M. Smith, M.D., head of the department of medicine at the State University of Iowa; C. W. Baldridge, M.D., professor of medicine, State University of Iowa, and Daniel J. Glomset, M.D., of Des Moines, were in charge. Following a six-thirty dinner, Dr. Smith addressed the society on Coronary Disease, Dr. Baldridge on Rheumatic Heart Disease, and Dr. Glomset, on the Use of Salicylates in the Treatment of Rheumatic Heart Disease.

T. E. Davidson, M.D., Secretary.

Clarke County

The Clarke County Medical Society entertained members of the Decatur and Warren County Medical Societies at a dinner and scientific program at the Osceola Country Club, Thursday, April 23. Twenty-three physicians attended and the following program was presented: Osteomyelitis, E. B. Howell, M.D., Ottumwa; Management of the Goitre Patient, Charles Lamb, M.D., of the Cleveland Clinic, Cleveland, Ohio; and Pneumothorax, a Clinical and Roentgenological Study, E. T. Edgerly, M.D., and H. A. Spilman, M. D., of Ottumwa.

Clinton County

Two Illinois physicians furnished the scientific program for the Clinton County Medical Society at its meeting Thursday, April 23. Frank E. Senear, M.D., professor of dermatology at the University of Illinois College of Medicine, spoke on Skin Diseases of Interest to the General Practitioner, and James G. Carr, M.D., professor of medicine at Northwestern University Medical School, read a paper on Biliary Tract Diseases.

Crawford County

The Crawford County Medical Society held its regular meeting at the Hotel Denison, in Denison, Thursday, April 2, and despite the inclemency of the weather, a large gathering was present. Dinner was served and the program of the evening followed immediately. The program was devoted to a symposium on tuberculosis. B. Carl Russum, M.D., professor of pathology at Creighton University, opened the program with a unique sketch of the history, incidence, and hygiene of tuberculosis. His discussion developed into the pathology of the various forms of tuberculosis and the present radical methods of immunization attempted in Paris. He augmented his lecture with pathologic specimens and cultures of the organisms. Maurice C. Howard, M.D., associate professor of medicine at Creighton University, took up the medical phase of tuberculosis and dwelt at length on pulmonary tuberculosis which he profusely illustrated with X-ray negatives. His discussion of allied and remote symptoms referable to pulmonary tuberculosis was illuminating. The last paper on the program was given by William L. Sucha, M.D., professor of orthopedic surgery at Creighton University, on Surgical Tuberculosis, with particular reference to bone tuberculosis.

J. James Duffy, M.D.

Fayette County

Members of the Fayette County Medical Society were hosts to the veterinarians of Fayette county at a meeting held Monday, April 6, in Fayette at the American Legion Hall. About forty attended the dinner, after which the following program was presented: Diseases Transmitted to Man from the Animal World, C. C. Hall, M.D., Maynard; Bangs Disease, Charles Murray, D.V.M., Ames; Undulant Fever, A. V. Hardy, M.D., Iowa City.

Johnson County

Wednesday, April 1, the Johnson County Medical Society met in Iowa City for its regular monthly meeting and heard the following two papers presented and discussed: Physiological Variations in the Total White Cell Count, E. D. Plass, M.D., and Compression Fractures of the Vertebra, A. W. Bennett, M.D., discussion opened by F. R. Peterson.

Kossuth County

Charles Mayo, Jr., M.D., of Rochester, furnished the scientific program for the Kossuth County Medical Society at its meeting held in Algona, Friday, March 20. His subject was Preoperative Preparation and Its Effect on Postoperative Results.

Linn County

The Linn County Medical Society met in regular session, Thursday, April 9, in Cedar Rapids, and Fred Smith, M.D., of Iowa City, was the speaker of the evening, taking for his subject, Arteriosclerotic Heart Disease. Following the program a buffet supper was served.

Marion County

Friday, March 27, the Marion County Medical Society met in Knoxville. Following a steak dinner at the Dutch Mill Cafe, the society transacted various

matters of business and then listened to an address by Mr. C. C. Heer, a local attorney, on the subject of Certain Legal Phases of the County Contract and their Solutions. Inclement weather cut down the attendance but those present considered it one of the most instructive meetings of the year.

C. S. Cornell, M.D., Secretary.

Marshall County

Dr. E. M. Mills, president of the Marshall County Medical Society, had charge of the April meeting of that organization which was held at LeGrand, Tuesday, April 7. Ralph E. Keyser, M.D., of Marshalltown, spoke on Unusual Findings in Surgery; W. F. Hamilton, M.D., of Marshalltown, took as his general subject, Anesthetics; and Raymond S. Grossman, M.D., of Marshalltown, presented Treatment of Mental Cases.

Monroe County

The Monroe County Medical Society held its regular quarterly meeting in Dr. Burke Powell's office on the evening of April 9. The society had as its invited guests, President-elect Channing G. Smith of Granger, and State Secretary Robert L. Parker, of Des Moines, as well as the members of the Monroe County Womans Auxiliary. A splendid dinner was served at the Imperial Cafe which was much enjoyed by all. After dinner the society was favored with interesting talks by Drs. Smith and Parker. Afterwards the members of the society and the auxiliary took part in their respective meetings. All enjoyed the visit of the state officers and feel very grateful for their kindness and hope we may have the pleasure of again entertaining them.

T. A. Moran, M.D., Secretary.

Page County

Physicians and lawyers of Page county and some from outside the county enjoyed a banquet at the Linderman Hotel in Clarinda, Wednesday, April 1, when the Page County Medical Society and the Page County Bar Association held a joint meeting. A. V. Hennessy, M.D., of Council Bluffs, was the principal speaker and addressed the group on Legislation Regulating the Care of Indigent Sick.

Polk County

The regular meeting of the Des Moines Academy of Medicine and Polk County Medical Society was held at Hotel Fort Des Moines, Tuesday evening, April 28, 1931. President Holbrook announced the affiliation of the Des Moines Academy of Ophthalmology and Otolaryngology with the society as a section. Mrs. Carl A. Stewart, chairman of the summer round-up of pre-school children, spoke briefly of the plan for this season. The scientific program was a Symposium on Psychoneurosis. The essayists were Francis A. Ely, M.D., who introduced the subject and outline; Hiram B. Henry, M.D., who spoke on Symptomatology, and Russell C. Doolittle, M.D., who concluded with a paper on Treatment. The subject was ably discussed by Tom B. Throckmorton, M.D., William E. Sanders, M.D., and Reuel H. Sylvester, Ph.D. The essayists then closed the program with additional arguments, substantiating experiences, and rebuttal. The meeting adjourned at 10:00 P. M. Seventy-five were in attendance.

Poweshiek County

Members of the Poweshiek County Medical Society met at Brooklyn, Tuesday, April 6, for a joint meeting with the dentists of the county. The dentists had charge of the program and R. A. Fenton, D.D.S., of Iowa City, addressed the group on Symptomatic Mouth Lesions. All the physicians in the county but one, and all the dentists but one, were in attendance.

Scott County

W. H. Gibbon, M.D., of Iowa City, furnished the scientific program for the Scott County Medical Society at its regular monthly meeting held in Davenport, Tuesday, April 7. He spoke on Some of the Newer Aspects of X-Ray Diagnosis of Gastro-Intestinal Lesions.

Washington County

A symposium on Goitre was presented by two Waterloo physicians at the regular meeting of the Washington County Medical Society, Tuesday, April 7. Thomas F. Thornton, M.D., discussed the surgical phase of goitre, and J. L. Kestel, M.D., spoke on the medical phase.

Webster County Meetings

Tuesday, March 31, the Webster County Medical Society held its regular meeting with E. T. Evans, M.D., assistant professor of orthopedic surgery at the University of Minnesota, as the speaker of the evening. He gave a well illustrated and very instructive talk dealing with the subject, Interpretation and Treatment of Common Back Injuries. The meeting was very well attended by local physicians as well as a great many from outside of our own county.

The last regular meeting of the Webster County Medical Society was held April 21, at Mercy Hospital. We had as our guest for the evening, Gordon F. Harkness, M.D., of Davenport, who gave a very interesting and markedly worth while paper on External Eye Conditions in General Diagnosis. Because of the state meeting in May, there will be no regular meeting during that month.

John C. Shrader, M.D., Secretary.

Woodbury County

Five Sioux City physicians discussed the subject, Sinus Disease in Relation to Focal Infection, at a meeting of the Woodbury County Medical Society, Wednesday, April 15. The speakers were Drs. James E. Reeder, F. L. Secoy, L. R. Tripp, F. W. Sallander, and A. C. Starry.

INTERESTING NEWS
In Brief

Harry M. Hoxsey, former associate of Norman Baker at Muscatine, recently attempted to conduct a cancer cure in Detroit, Michigan. He was associated with one H. Z. Van Dayning, director of an alleged cancer cure hospital in Detroit. Hoxsey was promptly placed under arrest on charge of practicing medicine without license and Van Dayning's license was revoked by the Michigan Board of Medicine on grounds of unprofessional conduct and maintaining a professional connection with an unlicensed individual.

Keokuk County Medical Society recently held a banquet in honor of Dr. S. A. Spilman, pioneer Ottumwa physician and former president of the Iowa State Medical Society. According to Dr. C. L. Heald the purpose of the meeting was "in evidence of our appreciation of the example of sincerity, common sense and enthusiasm established by him in the practice of medicine and surgery." More than one hundred physicians attended the dinner.

A plan has been worked out by the Woodbury County Medical Society for the operation of a free clinic in Sioux City offering general service in all branches of medicine and surgery and dentistry. The operation of the dispensary will be under the Rose Cross Medical and Surgical Relief Association.

In order to perfect a contract with their County Board of Supervisors the Boone County Medical Society has completed incorporation papers. Their contract with their Board of Supervisors is for the medical and surgical care of the indigents in the county and will be effective from April 1, 1930, to April 1, 1932.

The Lyon County Medical Society under the presidency of Dr. L. L. Corcoran is sponsoring a program to immunize all children of school and pre-school age to diphtheria. This will involve the treatment of 3,425 children of school age and about 1,000 of pre-school age.

A recent survey conducted by a business magazine for physicians indicates that the average net income for physicians in the United States is $5,059 a year. Surgeons average $9,233 while general practitioners average $4,188.

The report of a recent survey made by the American Medical Association of the hospitals in Iowa indicates 139 which are approved. These hospitals with 35 related institutions offer 18,217 beds for the care of the sick in the state.

The Iowa Supreme Court has set May 5th as the time for re-hearing the state's petition for an injunction against Norman Baker at Muscatine, seeking to restrain him from practicing without a license.

Notice has been served by the physicians of Muscatine that between the dates of April 1st and November 1st, all physicians' offices will be closed on Wednesday afternoons.

In the report of the committee on child health and protection surveying health conditions in 146 cities, Des Moines, Cedar Rapids, and Davenport were covered by the survey. In Des Moines the report showed 52 per cent of the children had received health examinations prior to the entrance into school, 11 per cent had received dental care, 15 per cent were vaccinated against smallpox, and 10 per cent were immunized against diphtheria. The survey in Cedar Rapids and Davenport compared entirely favorable with other cities of like size.

At a recent meeting of the Wapello County Medical Association, a resolution was adopted by those present suggesting that highly unfavorable and lasting injury might be suffered by middle-aged men burdened with the task of carrying a heavy casket, and in view of this fact, recommended that middle-aged and elderly men should not be used as pall-bearers.

The contract having been let, work is expected to begin at an early date on the new $500,000 wing authorized for the Mercy Hospital in Davenport. This addition will supply seventy-one additional beds and add materially to the surgical and X-ray facilities of the hospital.

A liquor prescription syndicate uncovered in New York City indicates that 1,000 physicians and 400 druggists are suspected of conspiracy to defeat the federal prohibition amendment. In the apartment of Nathan Bernstein 1,432 signed prescriptions for alcohol liquor were obtained.

PERSONAL MENTION

Dr. John McLeod, formerly of Kansas City, Missouri, has located in Marshalltown. He will be associated with Drs. Otis Wolfe and F. L. Wahrer, for the exclusive practice of eye conditions. Dr. McLeod served his interneship in ophthalmology in the Massachusetts Eye and Ear Infirmary in Boston.

Dr. Henry S. Houghton, dean of the University of Iowa Medical Society, was one of the twelve persons named recently to serve on a national commission for the investigation of foreign missions. The commission is composed of outstanding religious, educational and medical leaders of the country and the members of it will leave the United States sometime in October.

Dr. R. M. Chapman, formerly of Omaha, Nebraska, has located in Bridgewater to continue in the practice of medicine. He is a graduate of the State University College of Medicine, receiving his degree in 1929.

Dr. R. W. Beardsley, who for the past six months has been associated with Dr. E. A. McMurray at Newton, has gone to Livermore, where he will establish a practice.

Dr. W. W. Stevenson, formerly associated with Dr. E. F. Beeh at Fort Dodge, has located in Rockwell City, taking over the practice of Dr. J. N. Hoit, who with Mrs. Hoit, is planning an extensive vacation trip, after which they will make their home in Fort Worth, Texas.

Dr. James C. Kessler, of Iowa City, was re-elected president of the Iowa and Western Illinois Dermatological Association at its annual spring meeting held in Iowa City, Friday, March 20. Dr. J. W. Bailey of Des Moines was re-elected secretary of the organization.

Dr. Samuel P. Free, of Perry, has moved to Spencer, where he will continue the practice of his specialty, eye, ear, nose and throat diseases.

Dr. A. A. Pace, of Toledo, was elected mayor of that city, at the biennial election held Monday, March 30.

MARRIAGES

The marriage of Miss Marian Slawson of Osage to Dr. John Eiel, also of Osage, took place on Monday, March 30, in Cedar Rapids. Dr. Eiel has been practicing in Osage for the past six years.

DEATH NOTICES

Crane, George Henry, of Holstein, died March 31, at the age of sixty-three, following a five months' illness. His death occurred at Orlando, Florida, where he had gone in the hope of regaining his health. He was graduated in 1896 from the University of Iowa College of Medicine. At the time of his death he was a member of the Ida County Medical Society.

Raymer, Henry S., of Cedar Rapids, died April 1, at the age of seventy-five, after a stroke which occurred three weeks prior to that time. He was graduated in 1885 from the University of Illinois College of Medicine. At the time of his death he was a member of the Linn County Medical Society.

St. Clair, Frank E. E., of Hampton, died March 24, at the age of fifty-four, as the result of a stroke of apoplexy. He was graduated in 1904 from the Jefferson Medical College and at the time of his death was a member of the Franklin County Medical Society.

Smith, George E., of Mt. Pleasant, died March 25, at the age of seventy-seven, the immediate cause of death being uremic poisoning. He was graduated in 1880 from the General Medical College of Chicago and at the time of his death was a member of the Henry County Medical Society.

THE COOK COUNTY HOSPITAL CLINICS

The annual postgraduate summer clinics conducted by Cook County Hospital, Chicago, under the auspices of the Chicago Medical Society, will be held June 22 to July 3. Doctor N. S. Davis III, secretary of the society, reports that the clinics will be organized to give the practicing physicians in attendance practical instruction in the line of medicine and surgery. In fact, the two weeks will cover an intensive postgraduate study of the latest modern medical developments. Cook County Hospital probably offers a better opportunity for such study than any other hospital in the country.

Medical men from all sections of the United States and Canada are expected to attend these clinics which will be held from eight A. M. to five P. M. each day and the lectures that will be given three nights each week at eight o'clock. Physicians desiring further information about this postgraduate course should write the Secretary of the Chicago Medical Society, 185 North Wabash Avenue, Chicago.

A THIRD YEAR ADDED AT UNIVERSITY OF SOUTHERN CALIFORNIA

The school of medicine, University of Southern California, will offer the work of the third year, beginning clinical work, with the opening of the fall term in September, 1931, according to announcement of Dr. Paul S. McKibben, chairman of the medical faculty at Southern California.

This step in the development of the medical school at Southern California was revealed at a recent meeting of the medical advisory committee, of which Dr. W. W. Becket, of the board of trustees of the university, is chairman. Other members of the committee are Dr. Wayland Morrison, Dr. Seeley G. Mudd, Dr. Ernest A. Bryant, Dr. Granville MacGowan, and Dr. Edward M. Pallette, all of Los Angeles, and Dr. George Dock of Pasadena.

The school of medicine of Southern California was opened for the instruction of students in September, 1928, and during the academic year 1928-29, only the work of the first year was offered. In 1929-1930, the work of the second year was added. The opening of the academic year 1931-1932 in September, will mark the extension of the school's program to include the third year.

UNAUTHORIZED MAGAZINE SOLICITOR

Information has been transmitted to us from the Missouri State Medical Association that an unauthorized solicitor for magazine subscriptions has been operating through Missouri. This solicitor is canvassing physicians, purporting to represent Harper Brothers Publishing Company. His method of operation is to secure a deposit from the physician on magazines ordered, cashing checks but failing to turn in the subscriptions taken.

During his stay in Missouri he operated under the names of T. T. McLean and Leroy Dale. Correspondence with the National Publishers Association, 15 West Thirty-seventh Street, New York, indicates that this person has been defrauding physicians in the middle west for several months.

History of Medicine in Iowa

Edited by the Historical Committee

Dr. William Jepson, Sioux City
Dr. Arthur D. Woods, State Center
Dr. Frank M. Fuller, Keokuk
Dr. Walter L. Bierring, Des Moines
Dr. Norman F. Miller, Iowa City

THE NORTH IOWA MEDICAL SOCIETY

A Review of the Society Minutes from June 22, 1859, to Oct. 29, 1903

Through the thoughtful courtesy of Dr. F. A. Hennessy of Calmar, Iowa, the Historical Department has come into possession of a Book of Records of the North Iowa Medical Society, organized at McGregor, Iowa, June 22, 1859.

This interesting historical treasure is a careful record of the proceedings of this district medical society, as kept by the different secretaries throughout the period of forty-four years, all of the minutes being written in long hand.

The organization meeting was held at "Jones and Bass Hall in McGregor, at one o'clock p. m. on the 22nd of June, 1859, pursuant to a call published in the North Iowa *Times*, June 1, 1859."

A Constitution and By-Laws was adopted at this meeting. We quote from Article III referring to membership: "This Society shall consist only of such physicians and surgeons of the counties of Clayton, Fayette and Allamakee (amended June 7, 1861, to include Howard and Winneshiek counties), as are authorized to practice medicine and surgery by any medical college acknowledged by the American Medical Association as qualified to grant a diploma, unless there is good cause in special instances for the recognition of practicing physicians not having such credentials, the case or cases in question being presented to the Board of Censors, and having eventually the sanction of two-thirds of the members of the Society, and who have signed the Constitution and By-Laws."

The Committee on Credentials approved the following as charter members:

Dr. F. Andros, Garnavillo.
Dr. A. Warner, Elkader.
Dr. H. C. Martin, McGregor.
Dr. J. A. Blanchard, Elkader.
Dr. J. T. H. Scott, Monona.
Dr. John Low, McGregor.
Dr. Horace Hamilton, Farmersburg.
Dr. P. Gould Parker, McGregor.
Dr. Will A. Hyde, McGregor.
Dr. W. C. Lewis, Clermont.
Dr. Wm. Hoffbauer, Guttenberg.
Dr. John Linton, Garnavillo.

The officers elected at the first meeting were:

Dr. F. Andros, President.
Dr. A. Warner, Vice President.
Dr. H. C. Martin, Secretary.
Dr. Wm. Hoffbauer, Treasurer.

Censors: Drs. J. T. H. Scott, John A. Blanchard, and P. G. Parker.

An interesting item in the minutes is "Fee Bill as adopted by the North Iowa Medical Society, June 22, 1859."

1. For advice and prescription (office)	$ .50 to $	5.00
2. For visit and advice in town	1.00 to	2.00
3. For visit and advice on board boat	2.00 to	3.00
4. For visit and advice on board boat in case of malignant disease	3.00 to	5.00
5. For visit and consultation	3.00 to	5.00
6. For venesection, leeching and vaccine inoculation—each specially		1.00
7. For visit out of town—extra 50 cents mileage per mile in addition to the visit		
8. For rising at night, visiting, advice, prescription, etc., double any the specified fees		
9. For cupping, inserting seaton; issues, etc.	1.00 to	3.00
10. For postmortem examination in case of legal investigation	10.00 to	25.00
11. For capital operations such as amputations, lithotrity, lithotony, etc.	40.00 to	200.00
13. For amputation of fingers, toes, etc.	5.00 to	20.00
14. For opening of large abscess, dressing large wounds, etc.	5.00 to	10.00
15. For operation for strabismus	20.00 to	50.00
16. For operation for hair lip	30.00 to	60.00

17. For operation for cleft palate	50.00 to	100.00
18. For operation for taping for dropsy	5.00 to	20.00
19. For hydrocele	5.00 to	10.00
20. For visit and passing catheter only	2.00 to	5.00
30. For cure of stricture of the urethra	25.00 to	50.00
31. For gonorrhoea and syphilis (in advance)	10.00 to	50.00
32. For reducing luxation of large joints	10.00 to	100.00
33. For reducing fractures	5.00 to	10.00
34. For ligating arteries	5.00 to	50.00
35. For obstetrical attendance	5.00 to	25.00
36. For artificial delivery	10.00 to	50.00

A motion was carried that one hundred copies of the Fee Bill be printed on note paper, five copies to be furnished to each member of the Society.

The minutes of two meetings each year are recorded from 1859 to 1903, inclusive, the summer meeting usually held in June being called the annual meeting and the one during the winter the semiannual meeting. During the period of the Civil War, 1861-5, two meetings were held regularly each year. In the minutes of June 4, 1862, a motion was carried "that the delegates to the state and national convention hold over, there being no meeting of either the present year," which is the only reference to the war period. The programs during the four years also did not have any special reference to military surgery.

Some of the discussions were interesting considering the time when they were presented, as "diphtheria with characteristic rash" in 1862, "erysipelas complicating vaccination" in 1864, "cerebrospinal meningitis" in 1865, "acute rheumatism with heart symptoms" in 1865, "fracture of the internal table of the skull, the external table being intact" in 1865, "inhalation of steam in croup" in 1866, "successful operation of imperforated anus" in 1855, "continued use of chloroform for eight hours" in 1869, and "spotted fever" in 1870.

At the annual meeting in McGregor on June 4, 1873, Prof. J. C. Shrader of Iowa City was present as a guest and delivered an address on the Medical Department of the State University, and on October 29, 1903 (the last meeting recorded) his successor in the chair of obstetrics and gynecology, Dr. James R. Guthrie, presented a paper on "Postoperative Complications in Abdominal Surgery." At the meeting on December 5, 1877, the following resolution was adopted, indicating the Society's interest in the control of infectious diseases:

"That diphtheria is a disease eminently contagious and infectious in its character, that the habit of exposing the diphtheritic corpse to the view of healthy persons is a most reprehensible practice needlessly exposing them to the perils of contagion, that the assembling of large bodies of persons during an epidemic should be interdicted and that the established rules of hygiene should be rigidly observed."

The Society also manifested an early interest in higher standards of education and practice as indicated by the adoption of an amendment to the By-Laws at the meeting on June 7, 1875. "Article XX. No person shall be accepted as a student in medicine and surgery under the care of any member of this Society until said person shall have passed a satisfactory examination before the Censors of this Society in proof of which a certificate must be exhibited signed by at least two of the Censors, said examination to consist of a thorough review in reading, writing, spelling, arithmetic, grammar, geography, history of the United States, philosophy, rhetoric, algebra, with at least some knowledge of botany and geology, a sufficient acquaintance with the Latin language to enable him to appreciate technical terms and read current prescriptions, and in the opinion of the Censors a natural ability or aptitude for the profession." And again in the minutes of December 5, 1877, occurs the item: "Dr. H. H. Clark of McGregor read a draft of a bill to be presented at the next Legislature at its coming session designed to regulate the practice of medicine in Iowa, and a resolution was adopted to be presented to the Legislature, expressing the sense of the Society in favor of the Bill."

During the entire period of forty-four years covered by the Book of Record only one meeting at Monona, on October 4, 1902, was not held according to schedule because of a quorum not being present.

Any reference to the proceedings of the State Medical Society during the years 1859 to 1903 will show that the members of this District Society were likewise prominent in the discussions of the State Society, one member, Dr. S. E. Robinson, of West Union, being honored by election to the presidency in 1884.

The first president, Dr. F. Andros, of Garnavillo, who was re-elected in 1870, will be recalled as the first real pioneer physician to locate in Iowa. He was a graduate from the literary department of Brown University in 1822, and from the medical department in 1826, coming to Iowa, then a territory of Wisconsin, in 1833.

At the meeting of the North Iowa Medical Society on December 5, 1877, he read a "highly instructive and interesting resumé of his practice over a period of half a century mostly in this state and mainly relating to the treatment of the ma-

larial fevers." At the meeting at Postville, December 1, 1880, he presented his resignation to the Society and was elected an honorary member. At the same time a resolution expressing appreciation of his high services as one of the founders and faithful devotion to the best interests of the Society, was placed on record. After leaving Iowa in 1880 he practiced in Dakota for ten years, when he changed his residence to Minneapolis where he died at the age of ninety-one years.

To the future historian of Iowa medicine this complete record of the meetings of the North Iowa Medical Society will furnish interesting and reliable information of inestimable value.

W. L. B.

EVAPORATED MILK FOR DROUGHT RELIEF

Ten carloads of evaporated milk, comprising over 316,000 cans, were shipped during April to the drought stricken areas of Kentucky, West Virginia, Tennessee and Oklahoma by local chapters of the American Red Cross.

This milk was donated to the Red Cross for relief work by the 13,000 employees of the Borden Company of New York and its affiliated concerns. These employees voluntarily raised the fund to purchase this milk at cost price from their own company. This shipment is valued at approximately $25,000.

MANY GENERAL HOSPITALS CARE FOR MENTAL PATIENTS

The movement for the care and treatment of mental patients in general hospitals in the United States has made marked progress during the past decade, according to a survey by the National Committee for Mental Hygiene which is to be published shortly. Questionnaires were sent to some 600 hospitals registered as approved for interne training by the Council on Medical Education and Hospitals of the American Medical Association, and each of these hospitals was requested to furnish information as to the existence of clinics and psychopathic wards or departments where examination or treatment might be given to mental patients.

Of the 421 hospitals that replied, 122 reported special facilities; 17 reported incidental services; and a total of 3,298 beds for mental patients was reported by 53 of the 56 hospitals that have special wards. Fifty-six of the 122 hospitals reporting special facilities for mental patients have special mental wards. Ninety-seven of the 122 reported clinics; 31 of the 122 reported both wards and clinics; 25 of the 122 reported wards only; 66 of the 122 reported clinics only.

The survey was made in response to a need indicated by numerous requests from physicians, social workers and others for more extensive information than has been available up to this time. Heretofore the National Committee's list has contained the names of only about fifteen of the more widely known hospitals that have psychopathic wards or mental clinics or both, the latter usually conducted by state hospital departments. A new list will be published showing all the general hospitals having regular or incidental services.

PHYSICIAN QUALIFIED IN TUBERCULOSIS NEEDED

The United States Civil Service Commission has announced that a vacancy exists in the position of physician qualified in tuberculosis in the Regional Office of the United States Veterans' Administration at Dallas, Texas.

A man is desired for the appointment. The entrance salary is $3,800 a year. Higher salaried positions are filled through promotion.

Full information may be obtained from the Secretary, Board of United States Civil Service Examiners, post office or customhouse, any city, or from the United States Civil Service Commission, Washington, D. C.

PROFESSORS MENDEL AND HART ADVISORS ON NUTRITIONAL STUDY

L. B. Mendel, professor of physiologic chemistry at Yale University, and E. B. Hart, professor of agricultural chemistry at the University of Wisconsin, two internationally known authorities on protein, vitamins, and nutrition, who conferred for several days last week in Washington with scientists of the United States Department of Agriculture, have accepted appointment by the department as advisors to its protein and nutrition division in the bureau of chemistry and soils.

The department called upon these authorities for their advice and suggestions as to how its work on nutrition may be improved, and to assist the staff of the protein and nutrition division in strengthening the important lines of work now under way.

Professor Mendel and Professor Hart will prepare a report on the protein, vitamin, and nutritional work of the bureau which will include recommendations.

The plan of calling upon well known experts outside of the government service to act as consultants in an advisory capacity has already proved highly successful in the case of other divisions of the bureau of chemistry and soils.

NEW AND NONOFFICIAL REMEDIES

Ciba Company, Inc.

Nupercaine-Ciba

Ampules Buffered Solution of Nupercaine-Ciba 2 cc., 1:200.

Ampules Solution of Nupercaine-Ciba 5cc., 1:1,000.

Solution of Nupercaine-Ciba, 2 per cent.

Tablets Nupercaine-Ciba, 50 mg.

Lederle Laboratories, Inc.

Refined and Concentrated Antipneumococcic Serum, Type I-Lederle.

Swan-Myers Company

Mixed Grass Pollen Extract-Swan-Myers.

Russian Thistle Pollen Extract-Swan-Myers.

THE JOURNAL BOOK SHELF

BOOKS RECEIVED

*CLIO MEDICA—A Series of Primers on the History of Medicine. I—THE BEGINNINGS—EGYPT AND ASSYRIA.—By Warren R. Dawson, F.R.S.E.—II—MEDICINE IN THE BRITISH ISLES.—By Sir D'Arcy Power, K.B.E., F.R.C.S.—III ANATOMY—By George W. Corner, M.D. Edited by E. B. Krumbhaar, M.D.—Published by Paul B. Hoeber, Inc., New York, 1930.—Price, $1.50 for each volume.

*COMMON CONTAGIOUS DISEASES—By Philip Moen Stimpson, M.D.—351 pages, with 40 engravings and 2 plates.—Published by Lea & Febiger, Philadelphia, 1931.—Price, $3.75.

*EASIER MOTHERHOOD—A Discussion of the Abolition of Needless Pain.—By Constance L. Todd.—The John Day Company, New York, 1931.

*INTESTINAL TOXEMIA—Biologically Considered.—By Anthony Bassler, M.D., F.A.C.P.—Illustrated with 16 text cuts.—F. A. Davis Company, Philadelphia, 1930.—Price, $6.00.

*MEDICAL CLINICS OF NORTH AMERICA—(New York Number—September, 1930)—Vol. xiv, No. 2.—W. B. Saunders Company, Philadelphia and London.

*MEDICAL JURISPRUDENCE—A Statement of the Law of Forensic Medicine.—Third Edition—By Elmer D. Brothers, B.S., LL.B.—The C. V. Mosby Company, St. Louis, 1930.—Price, $3.50.

*MODERN SURGERY—By J. Chalmers DaCosta, M.D., LL.D., F.A.C.S., Samuel D. Gross, Professor Surgery, Jefferson Medical College. Assisted by Benjamin Lipshutz, M.D., F.A.C.S., Surgeon to the Mt. Sinai Hospital, Associate in Neuro-anatomy, Jefferson Medical College.—Tenth Edition, revised and reset.—1,404 pages with 1,050 illustrations, some in colors.—W. B. Saunders Company, Philadelphia and London, 1931.—Price, cloth, $10.00.

*PRACTICAL RADIATION THERAPY—By Ira I. Kaplan, M.D., Director Division of Cancer, Department of Hospitals, New York City—with a special chapter on APPLIED X-RAY PHYSICS—By Carl B. Braestrup, P.E., Radiation Physicist, Division of Cancer, Department of Hospitals, New York City.—354 pages with 227 illustrations.—W. B. Saunders Company, Philadelphia and London, 1931.—Price, cloth, $6.00.

PROGRESSIVE MEDICINE—March, 1931, Vol. I.—A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences.—Edited by Hobard Amory Hare, M.D., LL.D.—Professor of Therapeutics, Materia Medica and Diagnosis, Jefferson Medical College, Philadelphia.—assisted by Leighton F. Appleman, M.D., Instructor, Jefferson Medical College.—Lea & Febiger, Philadelphia, 1931.—Price, $3.50 per volume; $12.00 per annum.

SURGICAL CLINICS OF NORTH AMERICA—(Pacific Coast Number)—Volume x, No. 5, October, 1930.—(Issued serially one number every other month.) 271 pages with 136 illustrations.—Per Clinic Year (February, 1930 to December, 1930)—Paper, $12.00; cloth, $16.00. W. B. Saunders Company, Philadelphia and London, 1930.

*SURGICAL CLINICS OF NORTH AMERICA—(Chicago Number)—Volume xi, No. 1—February, 1931.—(Issued serially, one number every other month.) 225 pages with 72 illustrations.—Per Clinic Year (February, 1931 to December, 1931)—Paper, $12.00; cloth, $16.00.—W. B. Saunders Company, Philadelphia and London, 1931.

*Review appears in this issue.

BOOK REVIEWS

CLIO MEDICA

A Series of Primers on the History of Medicine. I—The Beginnings: Egypt and Assyria, By Warren R. Dawson, F.R.S.E. II—Medicine in the British Isles, By Sir D'Arcy Power, K.B.E., F.R.C.S. III—Anatomy, By George W. Corner, M.D. Edited by E. B. Krumbhaar, M.D. Published by Paul B. Hoeber, Inc., New York, 1930. Price, $1.50.

This series of primers, which presents a concise and readable history of medicine, has been designed upon lines unique in the fact that each booklet discusses a particular phase of medical history in its entirety and yet remains of pocket size.

Volume I discussing early Egyptian and Assyrian medicine has been prepared by Dr. Warren R. Dawson, whose studies and researches in the earlier periods of medical history have received favorable notice by all historians and his publications have been welcomed by British and American scientific journals for many years.

The volume is written in the charming style of a finished essayist and removes history from the category of tedious facts and dates, and presents it in an entertaining fashion which makes the reader loathe to release the volume before its completion.

It has not been my pleasure to read a more charming essay upon an historical subject at any time.

Volume II of this series traces the development of the healing art in the British Isles from the period of the Norman Conquest down to the present day. In an opening chapter the author discusses the medical situation at the dawn of recorded medical history, tracing this history through the period of Barber Surgeons, the period of medical corporations, the development and growth of hospital programs to the present period of medical education and regulation made possible by the banding of the profession into the present colleges of medicine and surgery.

The later chapters of the book indicate the growth of specialism in the British Isles, while the final chapter is devoted to "Some Masters of British Medicine," including short discussions of John of Gaddesden, John Arderne, William Harvey, Thomas Sydenham, William Smellie, William and John Hunter, Edward Jenner, Richard Bright, Thomas Addison, Thomas Hodgkin, Sir James Y. Simpson, Sir William Stokes, and finally Joseph Lister, "one of the greatest of the Masters in Medicine."

A delightful hour is assured any physician who reads this book.

Volume III of this series traces the history of anatomy from the time of the Greeks through the Middle Ages and down to modern times, introducing such corollaries of this study as Histology, Embryology and Neurology from an historical standpoint. Especially noteworthy are the illustrations, eight in number, which present graphically the development of our knowledge from the earliest, which were made in 1230 A. D., to those made following the Renaissance.

This volume will appeal to every student of medical history, but more especially to the medical student, since a perusal of such a volume will do much to give him a perspective of the oldest and most fundamental of medical sciences.

COMMON CONTAGIOUS DISEASES

By Philip Moen Stimson, M.D. 351 pages, with 40 engravings and 2 plates. Published by Lea & Febiger, Philadelphia, 1931. Price, $3.75.

This manual prepared according to the author as lecture notes for medical students is entirely a new treatise and one which covers its field in a thorough, painstaking fashion with sufficient brevity to strongly appeal to every practicing physician. The author discusses but ten diseases,* but these are ones common in every practice and ones requiring skill both in diagnosis and management. Sufficient space is provided under each heading for a discussion of the clinical manifestations and differential diagnoses to render recognition of these conditions relatively simple. The newer practices of management, prophylactic and curative treatment, are presented in detail.

The concluding chapters of the book deal with the general management of all contagious diseases and will be of great value, particularly to the health officer, the school physician, the pediatrician and the general practitioner. This volume is bound in flexible fabricoid and of convenient size for desk use.

EASIER MOTHERHOOD

A Discussion of the Abolition of Needless Pain. By Constance L. Todd. The John Day Company, New York.

This volume is the work of a lay researcher who, backed by medical data, tells the story of colonic analgesia (Gwathmey technic) in a language readily understandable by the average woman. While physicians will be interested in reading the book it has been prepared primarily for the information of prospective mothers and it is to them that this book is recommended.

The discussion has been divided into twelve chapters which deal with the history of the development of the Gwathmey technic of analgesia in labor, its advantages and accomplishments and many testimonials supporting its employment—testimonials which though over-enthusiastic at times, contain a world of truth.

The book offers a full bibliography and glossary. A final chapter lists the hospitals throughout the United States offering the technic. Unfortunately this list generally would seem inaccurate since the Iowa list is quite faulty and incomplete.

Since nothing but good can result from an understanding of this matter, the book may be safely recommended by physicians and should receive widespread distribution among prospective mothers.

F. W. R.

*Diphtheria, Vincent's angina, scarlet fever, measles, rubella, whooping cough, mumps, chickenpox, epidemic meningitis, poliomyelitis.

INTESTINAL TOXEMIA

Biologically Considered. By Anthony Bassler, M.D., F.A.C.P. Illustrated with 16 text cuts. F. A. Davis Company, Philadelphia, 1930. Price, $6.00, net.

The author summarizes his experiences of thirty years' work in Intestinal Toxemia. His book is an exhaustive treatise of the subject.

On page 84 he mentions 161 diseases and disorders of internal medicine that would lead to presumptive diagnosis of chronic intestinal toxemia. On page 71 he summarizes 71 individual symptoms. Both the diseases and symptoms remind one of an encyclopedia of diseases. He sent out a questionnaire to various specialists. On page 314 he summarizes 47 diseases in general internal medicine which are related to intestinal toxemia and 55 in gastroenterology, 11 in cardiology, 23 in neuropsychiatry and neurology, 16 in orthopedics, 36 in otorhinology, 29 in ophthalmology, 35 in dermatology, 24 in neurology, 17 in gynecology and 22 in pediatrics.

His method of isolation and the cultures of intestinal organisms are too exhaustive for ordinary use. The cultural characteristics of twelve of the intestinal pathologic organisms, 70 of the intestinal pathogenic organisms, 49 of the intestinal zymogenic organisms, and 50 of the intestinal saprophytic organisms, are explained in the text and listed in table form.

His treatment includes diets and vaccines. His method of making vaccines and the number of times he advises making new vaccines is out of the realm of the average practitioner. The reviewer would take issue upon giving vaccines by rectal instillation, although the reviewer has never tried it. His methods presented are too exhaustive for clinical application, but the book might serve as a reference presenting one man's idea of a much discussed and indefinite subject, the diagnosis of which is arrived at by exclusion, rather than inclusion.

D.M.B.

THE MEDICAL CLINICS OF NORTH AMERICA

(New York Number, September, 1930), Vol. xiv, No. 2. W. B. Saunders Company, Philadelphia and London.

This New York Number of the Medical Clinics contains the usual number of worthwhile contributions. Among the most interesting ones presented should be mentioned that by Dr. Charles A. Doan on "The Newer Aids to Diagnosis and Prognosis in Tuberculosis," that of Dr. Winfield Scott Pugh on "Tuberculosis of the Kidney in Childhood," that of Dr. Connie M. Guion on "The Treatment of Diseases of the Thyroid Gland," that of Dr. Samuel Brock on "The Epilepsies," and that of Dr. Rolfe Floyd on "Nephrosis."

The discussion of "Synthetic Diagnosis," by Dr. C.

Ward Crampton and "Object Lessons in Pediatrics" by Dr. Gaylord W. Graves, are unusual and entirely useful representing as they do much of personal experience and dealing with diagnosis from a broad viewpoint.

MEDICAL JURISPRUDENCE

A Statement of the Law of Forensic Medicine. Third Edition. By Elmer D. Brothers, B.S., LL.B. The C. V. Mosby Company, St. Louis, 1930. Price, $3.50.

This valuable work, now in its third edition, has been written by a jurist to acquaint medical students and practitioners with the general principles and rules announced by the courts in dealing with medical matters and relations as the same have come before them for adjudication.

The author treats of courts and procedures, the rules of evidence, the expert witness, the relation of the physician to his patient, the obligations imposed by the law upon physicians, civil malpractice, criminal malpractice, and the responsibilities and privileges of a physician in insanity proceedings.

While the author has introduced certain technical phrases in this dissertation, the discussions are for the most part written in a readily understandable terse language and because of the many case citations, rendered comprehensible. This is a volume that should be in the library of every practicing physician since no physician can know just when he may be called upon to appear in some capacity in court proceedings.

MODERN SURGERY

By J. Chalmers DaCosta, M.D., LL.D., F.A.C.S., Samuel D. Gross, Professor of Surgery, Jefferson Medical College. Assisted by Benjamin Lipshutz, M.D., F.A.C.S., Surgeon to the Mt. Sinai Hospital, Associate in Neuro-anatomy, Jefferson Medical College. Tenth edition, revised and reset. 1404 pages with 1050 illustrations, some in colors. W. B. Saunders Company, Philadelphia and London, 1931. Price, cloth, $10.00.

This treatise on general and operative surgery scarcely needs an introduction to the medical profession since it has been accepted for over 30 years as a standard and outstanding treatise on this subject. There is perhaps no other text so well known as this prepared by Dr. DaCosta and its usefulness is manifest in the fact that it is now in its tenth edition.

The present volume conforms in general style with the earlier editions. It is, however, entirely revised and brought up to date. In this revision the author has been guided by the test of experience and while he does not claim to have presented all of the newer methods he can justly claim the inclusion of all newer and proved procedures in this field. The book is used very largely as a textbook in medical schools, but because of its comprehensiveness, it would seem more suitable as a reference work.

The numerous illustrations are well chosen and the volume is well indexed.

PRACTICAL RADIATION THERAPY

By Ira I. Kaplan, M.D., Director of Division of Cancer, Department of Hospitals, New York City, with a special chapter on Applied X-ray Physics, by Carl B. Braestrup, P.E., Radiation Physicist, Division of Cancer, Department of Hospitals, New York City; 354 pages with 227 illustrations. W. B. Saunders Company, Philadelphia and London, 1931. Price, Cloth, $6.00.

This volume has been prepared by the radiation therapist of Bellevue Hospital, where some 2,000 cases are treated annually by means of X-ray and radium. Because of the wide experience of this author he is especially well fitted to present this subject and his presentation augmented and supported by the section on Applied X-ray Physics by Carl B. Braestrup, radiation physicist, makes this volume outstanding and unique in its field.

The author has stated as simply as possible the established principles of radiation therapy and the accepted methods for carrying out this form of treatment. The methods presented are those which have proved of definite value in his experience. The first 100 pages of the volume deal with the fundamental principles underlying X-ray and radium therapy including dosages. The remaining 250 pages are devoted to discussions of the application of this form of therapy to specific diseases. The concluding chapter of the book discusses accidents and burns.

The volume will be of extreme interest and importance to all physicians employing either X-ray or radium for treatment processes. The volume is unusually well illustrated.

SURGICAL CLINICS OF NORTH AMERICA

Chicago Number, February, 1931. (Issued serially, one number every other month.) Volume 11, No. 1. 225 pages with 72 illustrations. Per clinic year (February, 1931, to December, 1931,) paper, $12.00; cloth, $16.00. W. B. Saunders Company, Philadelphia and London, 1931.

One of the outstanding contributions to this number is an extensive article by Arthur Dean Bevan upon the principles involved in laparotomy operation. Other articles of particular interest are ones dealing with aerocele of the scrotum, and neuralgias of the cranial nerves, illustrating the various involvements of the individual nerves.

A group of cases showing the comparative value of intravenous and retrograde pyelographs in differentiating and diagnosing acute cholecystitis will be of interest to the general practitioner and the specialist alike. The article dealing with the improved technic of the Rammsteat operation in obstruction of the bowel at birth is of timely interest.

F. W. F.

The JOURNAL
of the
Iowa State Medical Society

VOL. XXI DES MOINES, IOWA, JUNE, 1931 No. 6

PRESIDENT'S ADDRESS*

WILLIAM A. ROHLF, M.D., Waverly

Last year I complied with the constitution and by-laws by making a formal president's address. The program committee insisted that I take a few minutes at this time to give an account of my stewardship.

During the year I traveled 13,846 miles in the interest of the Iowa State Medical Society (and I hope it was for the best interest.) I addressed thirty county and other medical societies during this period. I made fifteen trips to Des Moines for meetings of various committees and other groups. This entailed fifty-five days of time. I am hoping that perhaps this effort on my part may have contributed in a small way to the accomplishments of the Iowa State Medical Society and allied medical and health agencies.

The society can take just pride in the accomplishments of the Speakers Bureau; a detailed report will be available for your perusal. I predict that continued effort by this very efficient committee will bring results beyond the most sanguine hopes of those who originated its work in Iowa.

It is gratifying to note that there is progress being made in the coordination of various organizations, lay and professional, in public health and hygiene. That the state society is more active in this field than ever before is one of the results of the educational program of our Speakers Bureau. Closer relationship, better understanding, and greater efficiency for both the profession and the medical department of our State University is being brought about by the University Extension courses and by the work of the Medical Education and Hospitals Committee.

I cannot refrain from expressing my appreciation of the splendid efforts put forth by the members of our legislative committee who were on the job all the time, day and night. Perhaps they were more keenly disappointed than the rest of us because we did not get everything asked for, but much progress for the good of the profession and humanity at large was accomplished. Considering that there were others whose programs failed to pass, we have every reason to be pleased, hopeful, and optimistic for the future.

No one doubts that the members of our Medical Economics Committee were faithful and devoted to their tasks, and that they deserve our special gratitude and commendation. They have accomplished things for real progress, the details of which can be omitted.

I want to add my personal word of appreciation for the splendid work done by Dr. Jeannette Dean-Throckmorton in administering the office of the Medical Department of the Iowa State Library. I am very sure that as this service is better understood, that more and more of our members will avail themselves of the great help this institution affords.

I wish to present at this time a matter that has to do with medical students outstanding as to fitness, capability, and talent to do good work. Many of these are lost to the profession of medicine because, due to financial reasons, they are unable to continue their preparation. I do not know whether or not aiding such students would be a proper work for the state society to take up. The remedy, or at least a big step in that direction, to save this sort of young men for the profession could be brought about by the establishment of a rotating educational loan fund to be used by these young men or women. The proper agitation of this idea might result in legacies being left to this fund by physicians and the laity. The establishment of such a loan fund, it seems to me, should attract the attention of those who could assist in this matter if it is fully appreciated and understood.

It now remains for me to express my gratitude and appreciation for the honor extended me to serve as president of this splendid medical organization during the past year. I wish to acknowledge the help and splendid cooperation given me by the various committees, and especially do I want to mention the fine devotion and activity of

* Presented before the Eightieth Annual Session, Iowa State Medical Society, Des Moines, May 13, 14, 15, 1931.

our business manager, Mr. Blank. I want to give due credit to the prompt and efficient service of our office force. To me the pleasant associations and good fellowship, the new acquaintances made, a closer fraternity built up among the many physicians of the state will always be a cherished memory.

PRESIDENT ELECT'S ADDRESS*

CHANNING G. SMITH, M.D., Granger

It is becoming customary for your president elect to make some statement at this time concerning his intended activities for the coming year. These remarks probably fall into the same category as do smallpox, ingrown toe nails and other after dinner speeches. I trust that you will receive what I have to say as being in the nature of promises and not threats.

I appreciate from the very bottom of my heart the preference that has been given me. No normal person could deny a feeling of elation on being elected to this office. This position is accepted, however, not as an honor but as a service. It is fully realized that my acts will never redound as a credit to me unless I shall serve you fairly and faithfully. It will be remembered that I am responsible to you. To be frank, I am really fearful. It takes a lot of intestinal stamina for a man of my limitations and meagre caliber to undertake to act as the head of this great organization.

There are many problems confronting the profession. Not the least among these is the decision that must be made, sooner or later, concerning the part that official and non-official agencies are to play in the whole medical scheme.

Our societies were first formed with the express purpose of amplifying and improving medical education. To this duty was soon added the promotion of the science and art of medicine. For many decades these aims sufficed and much of the progress of modern medicine is due to the work of medical societies in constantly reeducating their members, thus keeping them abreast of scientific advancement. The economic developments of the present day make it imperative that medical societies shall become as strong business organizations as they are progressive scientific structures.

In our ever changing social and economic orders, the preservation of the private relationship between the physician and his patient, the insurance of progress in medicine, the salvation of the very life of the profession itself depends upon the strength and activity of medical societies.

We do not expect, in our time, to be able to offer the permanent solution to these problems. But, if we can help show the need for a strong organization, an organization that will represent the judgment of the whole profession, an organization which can speak with authority and will act as a unit in all our relations with official and non-official agencies, then the coming year will not be entirely lost. We feel that the Speakers Bureau should by all means be continued, aided and added to, until its activities have not only served every physician but have also brought to every citizen the story of modern medicine.

It is not only fitting but just and proper that the thanks of the State Society be wholeheartedly tendered Dean Houghton and his faculty members for the splendid courses sponsored by the College of Medicine and given under the direction of the Bureau.

If the prolific writings of our many lay critics are to be believed, the old family doctor is a thing of the past. In Iowa this is not the case. The great majority of our 2,300 members are these selfsame physicians, men who are able to treat intelligently 90 per cent of their cases without extensive hospitalization or advice of expensive specialists, too often men whose hours of labor, living conditions and remuneration would make a steam fitter faint, men whose actions have never caused unrest among the laity nor made it necessary for a committee to be formed on costs of medical care.

These men, overawed by the facile fingers and the shining scalpel of the surgeon, bewildered by the elaborate equipment of the specialist and astounded by the post mortem diagnoses of the eminent internist, have developed inferiority complexes. Nevertheless, these men, who of necessity must know something at least of all the diseases of men, women and children, are and should be regarded as the equal of those having an augmented knowledge of some particular phase of medicine.

If we can do anything to help raise the mental and material standards of these country physicians, can awaken in them a realization of their possibilities and capabilities, then I, at least, shall feel amply repaid. We have no quarrel whatsoever with the specialists and our remarks about them are not intended to be derogatory. In our complicated, enlarging, progressive system of practice, the specialist is actually and absolutely necessary. Our point is that here in Iowa the country doctor fulfills as great a need as does the specialist; that there is too great a difference between the two planes of practice, and that we must either raise the status of the ordinary doctor or in time, by reason of overcrowding alone, the position of the specialist will be lowered.

A child is born and in time grows to manhood.

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During the years of his productivity, perhaps a competency is accumulated. Should this man be satisfied with his position, retire from active life and rest upon the fruits of his labors, his mind and his body will rapidly degenerate and too soon his days upon this earth are ended. A business starts from a very humble beginning. If its products supply a very definite demand, the concern will grow and become favorably known in all sections of the country. The business becomes a living, growing institution, supplying the needs of a myriad of people and returning therefore great wealth unto its owners. If at this point the officers and directors of the company are contented with their station and income, if they are willing to rest upon the reputation gained in the years gone by, then this organization is destined to start down the trail that leads to oblivion.

Our society is in no material manner different from either the man or the business. We must progress or we will retrogress. There can be no standing still, satisfied with the magnificent accomplishments of our forebears. Therefore, there will be no turning back from the policies, from the ideals and from the advancement made by such men as Henry B. Young, William Jepson, Walter L. Bierring, M. Nelson Voldeng, Vernon L. Treynor, Lee Wallace Dean, William B. Small, John F. Herrick, John N. Warren, Max E. Witte, Donald Macrae, Jr., Oliver J. Fay, Frank M. Fuller, Smith A. Spilman, Michael J. Kenefick, T. U. McManus, John H. Peck, and W. A. Rohlf.

NERVOUS INDIGESTION*

A. A. Schultz, M.D., Fort Dodge

It occurred to me, when choosing a subject for presentation before this society, that it might be profitable for us to discuss a condition which every practitioner has to cope with frequently, although unfortunately the victim of this disorder too often receives either scant attention or improper management. The subject seems to me to be of great importance, because approximately one-half of all people who consult a physician because of chronic indigestion have no demonstrable organic disease. The condition must be classified as functional and labeled "nervous indigestion." In my attendance at medical meetings and courses in post-graduate instruction, I have observed that there is a tendency to engage in long dissertations on some rare disease which the average practitioner will see about once in five years, or to discuss and rediscuss the differential diagnosis of the many organic diseases occurring within the abdominal wall, paying little attention to the numerous and ever increasing number of conditions which result directly from an unstable nervous system.

We all realize that during the past ten years large numbers of our adult population have gone through a period of financial distress with its resultant worry, insomnia, and brain fag, while the younger generation seems intent on burning the candle at both ends. The result naturally is an increase in nervous disorders, and their recognition and proper management are of utmost importance.

The person who has nervous indigestion is suffering just as surely as the patient with gall stones or appendicitis. He cannot be dismissed with the advice that he is merely nervous. He cannot be cured by appendectomy, cholecystectomy or the Sippy diet, and I want to say frankly that it is a disgrace to the medical profession that many such patients exhibit from one to three scars resulting from unnecessary operations. Since the stomach and intestinal tract are controlled mainly by the autonomic nervous system, they are very sensitive to outside influences, such as anger, worry, fear and discomfort, with resultant irregularities in tonus, motility or secretion, and an accompanying syndrome of symptoms. These symptoms may be exaggerated out of all proportion to their exciting causes. Cannon[2] has demonstrated that there are centers for the emotions in the midbrain. Under ordinary circumstances and in people with a stable nervous system these centers are held in restraint by the cortex, but under conditions of stress and in the presence of an unstable nervous system the restraint is removed by brain fag, and digestive symptoms result.

It is well known that emotions such as excitement, fear, fatigue and anger will not only inhibit but reverse peristalsis; hence the vomiting of the young lady with an unfortunate love affair, the belching and gaseous distention of the worn-out business man. Many sensitive people experience increased peristalsis as a result of excitement, which manifests itself chiefly in diarrhea and gurgling. The condition of the nervous system and mind has a direct bearing on the secretion of the salivary, gastric and pancreatic juices, and variations in the equilibrium of the nervous system have a definite effect in decreasing or increasing the amount of secretion of these juices. It has frequently been observed in diabetic patients that nervous shock has a tendency to lessen the supply of insulin from the pancreas.

It is also well known and has been shown experimentally that emotions have a direct effect on the supply of blood to the mucosa of the stomach. Just as emotion or fear may produce blushing or blanching of the face, the stomach

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mucosa may blush or become pale, depending on the type of stimulus. Stomach symptoms may also result indirectly from the effect of emotion on the thyroid and adrenal glands. It seems obvious, therefore, that the symptoms of nervous indigestion must be just as real and troublesome as for instance those of urticaria, which often is a purely nervous disturbance having no etiology except emotion.

In order to obtain a clear conception of nervous indigestion it is important to keep in mind the predisposing and precipitating causes. In a large percentage of these cases, you are dealing with persons who unfortunately had the wrong ancestors, and were born equipped with nervous systems which will not stand up under the stress of adult life and therefore begin to "miss" and "knock." Frequently they have had improper early training and education, have been pampered, petted and shielded, and even encouraged in their nervous tendencies. In adult life such a person cannot face worries, humiliation, shock, overwork or overplay for any length of time without serious damage, and stomach symptoms begin to manifest themselves. Another smaller group of people have not necessarily inherited a tense nervous system, but as a result of long-continued stress and strain of various kinds, begin to lose their former self-control and exhibit classical nervous symptoms. These individuals fortunately offer a better prognosis than those who were born handicapped.

The individual symptoms of nervous indigestion are not unlike those of the three most common organic diseases which develop within the abdomen, and this may account for the frequency of operations. The most common stomach and bowel symptoms of nervous indigestion are anorexia, belching, nausea, vomiting, epigastric burning, or heartburn, epigastric weight or fullness, rumbling or peristaltic unrest, abdominal distention, flatulence, mucous diarrhea, abdominal cramps and constipation. Since most of these symptoms occur also in organic disease, a careful history and analysis of symptoms is always necessary and is by far the most important part of the examination. No laboratory test or X-ray film can take the place of the history in this type of case, because the patient, if you give him the proper leads, will unfold a story which is quite convincing. When this condition is suspected a detailed family history is of utmost importance, because in a large majority of cases one or more near relatives, especially brother, sister, father or mother, has shown evidence of constitutional nervous instability and a history of insanity in the family can often be obtained by proper questioning. The past history may also reveal information of importance. The patient frequently volunteers the information that she cannot remember when she had good digestion and that even in childhood she had a weak stomach.

Patients with organic disease tell a different story. Sudden indigestion in adult life with no previous attacks may mean cancer. Intermittent attacks of indigestion with normal periods in between suggest ulcer. Chronic indigestion with intermittent attacks of upper abdominal pain accompanied by vomiting and often followed by jaundice certainly suggests organic disease in the form of gall stones. Patients with functional disorder complain almost continually and are usually relieved more by a vacation than by anything else. One of the most essential points in the history of these cases is that the symptoms are always more pronounced following periods of stress, anxiety, emotional debauches, etc. There are also some general symptoms and characteristics which aid in diagnosis; namely, weakness and fatigue which is all out of proportion to any physical abnormalities found. The patients are always tired in the morning. They usually do not sleep soundly and their attacks of indigestion are almost invariably accompanied by palpitation of the heart and not infrequently by numbness of the extremities.

When one analyzes the individual symptoms of the functional case, certain characteristics stand out which differentiate them as a rule from organic symptoms. The pain in functional disease is usually quite indefinite, it varies as to location, and does not appear at any particular time of the day or night. The history seldom reveals pain severe enough to require a hypodermic. It is described more often as a superficial burning, pressure, feeling of lead on the stomach or just a queer sensation.

Patients with nervous indigestion are never awakened from a sound sleep as are those with appendicitis or gastric ulcer. They seldom obtain relief from alkalis or food and after an attack has subsided it is unusual to find localized residual tenderness. Belching is very common but differs from that observed in organic disease, in that it occurs chiefly when the patient is nervous, upset or only while being observed. I have frequently seen these people belch continuously during the physical examination and then stop suddenly during the interview following the examination. Organic belching occurs regularly at some time in the gastric digestion cycle. Long continued belching is always due to swallowing of air and cannot be organic. The bloating complained of is usually a result of swallowed air. Nausea usually occurs as a reaction to some mental upset and has no definite relation to meals. When vomiting

is complained of, it usually is really regurgitation, comes on during the meal or soon after eating, is accomplished with very little effort and permits the patient to return and complete his meal. Vomitus which shows no evidence of stasis and is not the hypersecretion type is usually of functional origin. Epigastric burning is a common symptom in nervous dyspeptics, but is more superficial in these cases, does not show a definite relation to food intake and is not constantly relieved by soda or food as is the "heart burn" of ulcer. Epigastric weight and fullness cause the patient to feel that the food is undigested, and produce the sensation of a lump of lead on the stomach.

Rumbling, abdominal distention and flatulence are common to both functional and organic diseases of the digestive tract, but the rumbling is only an exaggerated sensation of shifting of gas in the intestinal tract and is never experienced as visible peristalsis. Visible peristalsis, except in a very thin person, suggests obstruction. Abdominal distention is usually only subjective and not confirmed by examination.

Neurotics commonly complain of the too frequent discharge of flatus, either during defecation or at other times, but at the same time they are annoyed if they fail to pass gas.

Mucous colitis is a real and distressing symptom with a large number of nervous dyspeptics and deserves more consideration than my time will allow. On account of the cramps commonly associated with mucous colitis, the appendix is frequently sacrificed needlessly and the patient made worse. Periodic diarrhea and discharges of mucus in strings or casts, associated with cramps in a nervous person, should determine the diagnosis. There is every reason to believe that in a majority of cases it is a pure neurosis. This condition should not be designated colitis, because no real inflammation or ulceration of the bowel can be demonstrated. Constipation occurs so frequently in organic as well as in functional disease that this symptom alone is not of great significance, except under certain conditions. When constipation develops suddenly in a person who previously had regular bowel movements and is definitely not a result of diatetic errors or change in habits, the physician should be on guard for organic disease.

Neurotic people frequently become constipated from several causes. Often they get the physic habit because they have been told that their "auto intoxication," whatever that is, must be removed by cathartics, and many of these symptoms are a result of this "physic life." Others naturally have a comparatively sluggish bowel, due to the presence of extreme gastro-enteroptosis. Many are constipated on account of their inactivity, their dehydration and their starvation diet which leaves no residue to stimulate the bowel.

Progressive loss of weight should always be looked upon as organic until proved otherwise, but these dyspeptics very often eliminate so many foods from their diet, chiefly on account of fear, that finally they are practically on a starvation diet and naturally lose weight, develop some anemia and their appearance may suggest cancer.

Diagnosis. It is possible to diagnose a large percentage of cases of nervous indigestion by a careful and painstaking history alone, but a diagnosis should certainly never be made without the most complete physical examination. This is important for several reasons, namely: nervous people are just as susceptible to organic disease as others, and the assumption without proof that all of their symptoms are of functional origin might result in a failure to recognize such diseases as early pulmonary tuberculosis, anemia, cancer, syphilis, hyperthyroidism, and lesions of the intestinal tract. A failure to remove an organic lesion in a neurotic patient is just as serious as operating unnecessarily.

A complete examination is one of the most important aids in treatment, because many patients, if they have the necessary confidence in the examiner, when assured in a convincing and authoritative way that they have no organic disease, are greatly relieved mentally and ready to co-operate in following out therapeutic suggestions. The examination should begin with a general inspection of the patient, for many clues can be elicited which suggest an unstable nervous system, namely: cold, mottled, slightly cyanotic extremities, evidence of biting the finger nails, dermographia, scratch marks on the back, bromide eruptions and a tendency to faint. If the patient can afford them, all laboratory and X-ray data should be collected, if for no other reason than the psychic effect. The most important conditions which must be ruled out by the examination, X-ray and laboratory tests are gall bladder disease, peptic ulcer, appendicitis, cancer of the stomach and colon, diverticulitis of the colon, intestinal parasites, intestinal allergy and general diseases, such as hyperthyroidism, hypothyroidism, hypertension, early myocarditis, pulmonary tuberculosis, pernicious anemia, arthritis of the spine, alcoholic gastritis, diseases of the urinary tract, and syphilis.

We must remember that the early symptoms of pulmonary tuberculosis are sometimes indigestion and anorexia. In hyperthyroidism, the hands are warm instead of cold. In hypothyroidism, there is a tendency to somnolence, while neurotic patients usually have insomnia. Arthritis of the spine may cause abdominal pain. A routine Was-

sermann test may show that an apparent neuraesthenia can be cured with arsenicals, mercury and bismuth. Alcoholism, overeating, rapid eating and improper diet, such as an excess of indigestible roughage, should all receive due consideration.

The usual search for all foci of infection should be made, but the discovery of such foci certainly should not convince the examiner that the sole cause of the patient's trouble has been discovered. I have seen many a patient, minus teeth and tonsils, with cervix well cauterized, uterus suspended, appendix and gall bladder removed, and stomach treated for ulcer, still complaining and seeking relief from a purely functional disorder.

Coronary disease in a tired, overworked and nervous business or professional man has been passed up as nervous indigestion, and such a mistake is indeed very embarrassing when your patient makes his exit quite suddenly some day with a coronary occlusion. A careful history and possibly a therapeutic test should make the differentiation in these cases.

The time allotted will not permit me to discuss the treatment of nervous indigestion in detail, but a few suggestions seem necessary. As I have stated before, we must first be sure that the condition is functional. In my opinion the most important part of the treatment is the interview with the patient at the completion of the examination. He should be told without any reservations and in a convincing way that his symptoms are of nervous origin, but by no means should an impression that the complaint is imaginary be left with the patient. It should be demonstrated in as simple a way as possible that the nervous system has a definite control over the stomach and bowels and that nervous instability can and does produce innumerable symptoms. He must be made to realize that if he was born with an inferior nervous system, it is impossible to replace it with a new one and therefore his life and activities must be adjusted in such a way as to throw no unnecessary strain on the weakest spot. Disturbing factors in the home of any kind, especially marital infelicity, should be sought out, discussed freely and sympathetically and an attempt made to correct them. All other precipitating causes should be gone into in detail and their solution attempted. Attention should be centered on the treatment of the nervous system itself and many times the proper kind of a vacation is the only treatment necessary. Since insomnia is almost a constant symptom, sedation is by all means indicated and physical as well as mental rest may be necessary in the more severe types. Sedation may be accomplished by hydrotherapy, physiotherapy and the use of mild hypnotic drugs, but never by opiates. The milder barbital derivatives may be taken over a long period of time as a crutch for the nervous system, without any untoward symptoms in most people. There is no indication in my opinion for such so-called digestants as pepsin and pancreatin, because in the first place the stomach itself needs no treatment and in the second place it has been shown by Fermi that these substances have no influence on gastric digestion unless given in enormous doses. The general use of so-called nerve tonics should be discouraged because most of them contain strychnine and certainly a nervous system which is already on edge will not be benefited by therapeutic doses of this drug. If the patient must have a bottle of medicine, some harmless mixture such as beef, iron and wine would have the proper psychic effect without producing harm.

The dietetic habits should be thoroughly investigated and necessary alterations made. Many of the sufferers have been advised to remove one thing after another from their diet until they fear food of all kinds and suffer from malnutrition. The type of diet depends somewhat on the type of patient. Those with mucous diarrhea or so-called spastic colitis must have a smooth diet with very little residue, and as a general rule this is the best diet on which to start any nervous patient. Residue producing foods can be added gradually as indicated. Many people come to us afflicted with the roughage habit and their intestinal tracts are constantly crammed with indigestible roughage instead of good nourishing food. The daily use of physics should be condemned, but when indicated, bulk producers such as agar and lubrication with mineral oil may be substituted. Enemata of normal saline are much more preferable than cathartics, because most physics irritate the entire intestinal tract when unloading of only the lower bowel is desired.

Foci of infection, when definitely demonstrated, should be removed with the hope of building up the patient's resistance and possibly preventing the development of serious organic disease, but it is an inexcusable mistake in a functional case to claim that the removal of all foci of infection is most certainly going to restore an unbalanced nervous system, because the result is usually disappointing. All co-existing organic disease should of course receive proper treatment, but at the same time the general management of the nervous system should not be neglected.

CONCLUSION

This paper is a plea for over half of the dyspeptics who consult physicians. Its purpose will be served if it succeeds in arousing a few physicians from their lethargic way of handling nervous people.

A large part of our income is derived from people with functional conditions and not until we realize that they are real sufferers, that they should be examined and treated in some systematic way, that the autonomic nervous system is just as surely a part of the human body as the appendix or gall bladder, will we have fulfilled the primary purpose of our occupation, "healing the sick."

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BENIGN POLYPI OF THE COLON AND THEIR RELATION TO MALIGNANCY*

Harold E. Hullsiek, M.D.,
The Miller Clinic, St. Paul, Minnesota

Cancer claims one out of every twelve members of the human race. One out of every thirty lethal cancers occurs in the rectum. Carcinoma of the intestinal tract comprises 12 per cent of all cancers of the body, and 65 per cent of these are in the rectum. Lockhart-Mummery, after a study of 200 cases of carcinoma of the rectum, believes that the most important predisposing cause, apart from age, is the presence of benign adenomata. In a large majority of his cases in which a segment of bowel had been resected for carcinoma, associated adenomata were present. Verse asserts that most gastro-intestinal cancers arise from simple adenomata, themselves the result of inflammatory hyperplasia.

In a series of 127 cases of polyposis collected from the literature in 1928 by the author, is found a known malignancy incidence of 34.6 per cent. An additional 31 of these patients died after having suffered symptoms which were very suggestive of malignancy, so that it is reasonable to suppose that the index is considerably higher than the figures show. Jones, in speaking of polypi, says that they are, ". . . a condition we have become more and more to believe of great importance, of even greater importance than carcinoma itself, for polypi frequently become carcinoma, and proper treatment before they become malignant means permanent cure." Yeoman, in speaking of single, benign polyps, says, "Unless thoroughly removed at the base they are likely to recur and are prone to malignant degeneration." Nowhere, according to Ewing, can more clearly be demonstrated the logical transition from simple inflammatory hyperplasia to tumors which are morphologically, pathologically, and clinically adenomata and carcinomata. The foregoing remarks and quotations should be sufficient to emphasize the necessity for a keen appreciation of the potential dangers of benign tumors of the bowel.

A tumor, according to Ewing, is an autonomous new-growth of tissue, and may be classified according to one of three plans, regional, etiologic, and histologic. The tumors under consideration are obviously best discussed from the histologic standpoint, yet at times their morphologic features must also be considered.

In a collection of 46,379 cases of rectal disease of all types, benign tumors were found in 554 instances. In 1904, Dewis collected reports of 219 cases of benign tumors of the intestinal tract, on each of which a microscopic diagnosis was available. Leichenstern collected 128 intestinal polypi from the literature. Of the total 247 cases in the two series, 243 tumors were in the rectum and colon, and 202 were adenomata. We are able to state with a reasonable degree of assurance that approximately 50 per cent of all the benign growths of the intestinal tract are in the rectum, hence well within reach of the examining finger. The moral is obvious.

In the colon we find angiomata, fibromata, myomata, lipomata, adenomata, and papillomata or villous tumors, the latter being extremely rare. The distribution of the various types is shown in

	Angio. & Papil Tumor.	Fib.	Myo.	Lip.	Aden.	Total
Duodenum	0	0	3	6	6	15
Jejunum	0	0	2	4	8	14
Ileum	0	2	11	7	37	57
Appendix	0	0	1	0	2	3
Cecum	0	0	3	2	6	11
Colon	0	1	5	10	40	56
Rectum	2	2	10	6	156	176
Small bowel	1	0	1	2	0	4
Intestine (undefined)		0	4	7	0	11
Total	3	5	40	44	255	347

* Read before The Webster County Medical Society, Fort Dodge, November 18, 1930.



Fig. I. Benign polyp. Small regular glands.



Fig. II. High magnification of a benign polyp.



Fig. V. Low magnification of single benign polyp.



Fig. IV. High magnification of malignant polyp, shown in Fig. III.



Fig. VI. Entire colon removed at operation. The mucosa can be seen to be replaced by hundreds of polypi.

the accompanying table of Dewis' and Leichenstern's 347 cases. An inspection of this table shows a preponderance of adenomata in almost all parts of the intestinal tract, there being a total of 255 adenomata in 347 cases.

Analysis of Dewis' 219 cases from a slightly different angle shows similar results:

	Total No.	Per cent	Rectum	Per cent
Angioma	3	1.3	2	66
Fibroma	5	2.2	2	40
Myoma	40	18.2	10	25
Lipoma	44	20.0	6	14
Adenoma	127	57.9	81	64

Here we find that 57.9 per cent of the 219 tumors reported by Dewis were adenomata, and 64 per cent of these were situated in the rectum. The distribution of adenomata in comparison with all other forms explains the interest surrounding them in a consideration of benign tumors of the colon.

	Sm. gut per cent	Lg. gut per cent	Rectum per cent
Adenoma	11	25.2	63.8
All other forms	48	27.1	24.8

The adenomata will be seen to increase in frequency in direct proportion as we proceed distally through the gastro-intestinal tract. In the small bowel other tumors are four times as common; in the large intestine they occur with the same frequency as all other forms; while in the rectum they are found three times as often as all other forms combined.

Adenomatous polypi are important not only because of their frequent occurrence, but for the same reason that any benign tumors attract more than passing attention, their potentiality of becoming malignant. In the author's collected series of multiple adenomata there was a known malignancy of 34 per cent, while in Soper's series the figure was 43 per cent. In the author's series of 25 personal cases of single polypi, there were six that were cancerous.

New growths in the colon may or may not be polypoid in shape. The word "polyp" has a purely morphologic application and bears no relation to histologic character. A polyp is merely a new-growth with a pedicle and may be an adenoma, fibroma, or a lipoma, and may be benign or malignant. The numerous attempts at classification of polypi, either clinical or pathologic, have been unsatisfactory. Mummery groups the adenomatous polypi of the colon as follows:

1. True multiple adenomata.
2. Multiple polypi associated with hyperplastic tuberculosis.
3. Polypi accompanying old structures of the rectum.
4. Polypoid conditions resulting from ulcerative colitis.

It will be seen that the latter three groups in the above classification have definite associated irritative lesions. The relation of polypi to mucous membrane irritation is well known.

In discussing adenomata it should be recalled that there are two apparently distinct types which, although histologically similar, are different in distribution, in the production of symptoms, in prognosis, and in many other ways.

Erdmann and Morris in 1925 suggested a clinical instead of a pathologic grouping which seems



Fig. III. Section of malignant polyp removed from sigmoid of the father of the 10 year old boy.

adequate. Single or scattered polypi, sometimes the obvious result of irritation, again with no discoverable associated etiologic lesion; sometimes quiescent and discovered incidentally, at other times producing violent symptoms necessitating immediate intervention, constitute the class now known as the acquired type. Clinically this type of adenoma occurs most frequently in children, but is also seen often in adults. In my own series the ages ran from 3 to 71 years.

As has been said, 63 per cent of the adenomata of the intestinal tract are located in the rectum. The single polypoid adenoma may be found immediately inside the anal canal, in the ampulla of the rectum, at the rectosigmoid, or in the sigmoid itself. Palpable pedunculated tumors in the anal

canal are more likely to prove to be hemorrhoids which have undergone inflammatory change. If situated low down, the tumor sooner or later develops a pedicle sufficiently long to permit it to protrude during defecation. A frequent site for single polypi is the anterior wall of the rectum at the sharp fold marking the rectosigmoid.

The adenomatous polyp is not a true adenoma but merely a polyp covered with more or less normal mucosa. Macroscopically it is bright red, glistening, mulberry-like, and varies in size from two to three centimeters in diameter, to that of a walnut. Tumors the size of an orange have been reported. These tumors bleed easily and thus exhibit as one of their early symptoms a streaking of blood in the stool. The pedicle may be short and thick, or slender and several inches in length. Microscopically the tumors are seen to spring from the mucosa of the intestine and have a connective tissue stalk covered with glandular epithelium showing hyperplasia. Ewing calls the development of adenomatous polypi "inflammatory adenoid hyperplasia."

In considering the question of malignancy in single polypi we must remember that these tumors are usually promptly removed as soon as they are discovered, thus ending once and for all any chance of their becoming malignant. In my series of single polypi there was malignant degeneration in 24 per cent.

From the fact that benign, solitary adenomata are frequently seen in children, one would feel that the incidence of carcinoma of the rectum in childhood should be higher than is actually the case, if these tumors have such a high malignancy index. Unfortunately we have no information as to the length of time these tumors may be present before cancerous change occurs, but apparently it may be years.

The symptoms vary from none at all to slight signs in the case of small tumors, occasional bleeding, and depending on the size and location, tenesmus, and a sense of incomplete defecation, to obstruction or intussusception in the case of large ones. The following table shows the symptoms in the author's series.

No symptoms	5
Bleeding only	7
Bleeding and irritation	1
Bleeding and discharge	2
Bleeding and prolapse	4
Prolapse only	1
Bloody diarrhea	2
Sense of incomplete evacuation	1
Pain referred to bladder	1
Obstruction	1

Bleeding is one of the earliest symptoms of carcinoma of the rectum. Buie says, "Bleeding is the most constant sign of malignant disease of the lower colon. Bleeding is probably one of its earliest manifestations." It will be seen from the above table that bleeding occurred as one of the symptoms in 16 out of 25 patients. Jones says, regarding polypi, "Blood is also present with polypi of the colon or rectum, a condition which we have become more and more to believe to be of great importance, of greater importance than carcinoma itself, for polypi frequently become carcinoma, and proper treatment before they become malignant means permanent cure."

Single adenomatous polypi should be considered as premalignant growths and as such should be removed promptly and completely when found. If the growth is low in the anal canal or rectum the sphincter may be relaxed with novocaine, after which the polyp may be prolapsed and the pedicle ligated. If high in the rectum or in the sigmoid it may be removed through the proctoscope by means of a snare. Certain precautions should be used in snaring tumors which are situated above the lowest valve of Houston, since at this level the peritoneal reflection occurs and too full a bite may result in an opening into the peritoneal cavity. Ordinarily, even with a cold snare, the bleeding is only slight but may occasionally be troublesome. One of my cases bled sufficiently to fill the rectum with clots several times and only ceased when the stump of the pedicle was fulgurated. No difficulty of this sort has occurred since using the diathermy snare.

In the case of congenital polyposis we have an entirely different picture from that of a single polyp. In this type we find the mucosa of the bowel replaced by hundreds of small polypoid adenomata. Luschka estimated the number in his

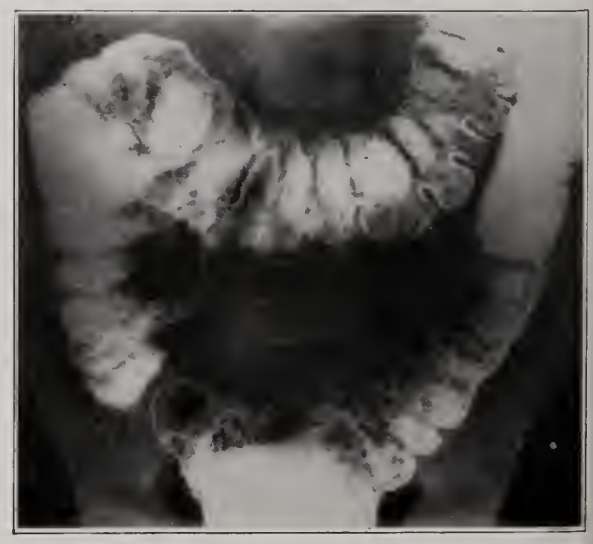


Fig. VII. X-Ray of colon of 10 year old boy showing polyposis. This case is the third generation so affected in this family.

case as 10,000. This form usually makes itself evident in childhood or early youth and rarely has a discoverable associated etiologic lesion. This disease has a distinct familial tendency and a malignancy index of from 40 to 50 per cent. It is the true multiple, adolescent, congenital polyposis, and to this type only should the term multiple polyposis be applied. Scattered single polypi do not necessarily indicate a multiple polyposis.

The average age in 127 cases of multiple polyposis was 30.9 years, with an average duration of symptoms of over ten years. As to familial tendencies we may again quote Lockhart-Mummery: "It appears to be an hereditary condition, as it can be traced through several generations, and the curious thing is that in such families a large proportion of individuals die at a comparatively early age from cancer of the bowel." Dukes reports one family in which his patient had polyposis, while the mother, six uncles and aunts, and a grandfather died of cancer of the bowel. I have a patient at present under my care with this condition, a boy ten years of age. His father and an uncle died of polyposis, verified at autopsy, while the grandfather died of cancer of the rectum.

In a consideration of any surgical procedure in cases of polyposis, it immediately becomes evident that the type of operation is governed by certain features of each individual case. We must consider the question of malignancy, which is often present when the case is first seen, extent of involvement, general condition of the patient, and the technical ability and surgical experience of the operator. The treatment is by no means standardized, and is in general very unsatisfactory. Ileosigmoidostomy followed by colectomy has been successfully done three or four times for the relief of this condition. Coffey successfully performed a total colectomy on a woman with the disease. Appendicostomy has failed entirely in some cases, while in others it apparently afforded relief while the opening persisted, but the tumors sprang forth with renewed vigor when the appendicostomy was closed. Radium and X-ray therapy have been employed but with disappointing results. Ileostomy or cecostomy with irrigations has resulted in at least a temporary disappearance of the tumors. Erdmann says: "One may sum up the present status of treatment of this condition by saying that the only method which holds out any hope for cure in the disseminated variety is one imposing upon the operator great technical difficulties, upon the patient great danger, and upon both the possibility that a successful operation may prove fruitless because the operator has been unable to determine accurately the extent of the process, and has, therefore, left behind areas capable of transmitting all the original potentialities of the disease."



Fig. VIII. Same colon as Fig. VI.

The cause of death in multiple polyposis is in 50 per cent of the cases due to carcinoma. The remainder die from anemia, sepsis, exhaustion, and starvation. Fortunately it is a comparatively uncommon condition.

Little has been said in this paper concerning the other benign tumors of the colon because of their comparative infrequency of occurrence as well as proneness to remain benign. The adenomata represent a problem which we must face as one of the things to be recognized in our struggle with cancer. Early recognition and early operation are of paramount importance in the treatment of this dread disease, and an appreciation of the menace of the more common benign polypi of the colon will lead to earlier diagnosis of cancer, a larger number of operable cases, and a consequent lowering of mortality.

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HEMATURIA*

RICHARD B. HULLSIEK, M.D.,
The Miller Clinic, Saint Paul, Minnesota

The discharge of blood in the urine is often indicative of grave underlying pathologic change in the genito-urinary tract. The term hematuria does not imply any differentiation between gross and microscopic bleeding.

A great majority of the diseases of the urinary tract at some time give rise to hemorrhage, in many cases as a characteristic symptom, in others only as an infrequent complication. If we consider the vascularity of the organs concerned, it will not seem surprising that this should be true. The kidney in particular is an organ of exceptional vascularity, and that portion of the bladder most susceptible to disease, the base, is also rich in blood vessels.

Paschen,[1] in 1915, reviewed 218 cases of hypernephroma and found hematuria to be the initial symptom in 46 per cent. In 156 cases of bladder tumor Cabot[2] found hematuria to be the earliest symptom in 117. Albarran[3] gives it as the initial symptom in 148 out of 200 cases studied by him.

Hinman,[4] in an analysis of the published work of eight surgeons found that in 709 cases of renal growths, hematuria was the symptom of onset in 42 per cent.

Below are tabulated the findings in 100 consecutive cases of hematuria in which I have had the opportunity to make urologic investigations.

RENAL LESIONS		
Calculus	9	
Tumor	4	
Tuberculosis unilateral	5	
Tuberculosis bilateral	2	
Pyelonephritis	8	
Nephritis	3	
Ruptured kidney	2	
Polycystic kidney	1	
Hydronephrosis	6	
	40	40
URETERAL LESIONS		
Calculus	8	8
BLADDER LESIONS		
Papillary carcinoma	6	
Infiltrating carcinoma	8	
Benign papillomata	7	
Calculus	4	
Cystitis	4	
Ulcer	3	
Spinal cord bladder	1	
	33	33
PROSTATIC LESIONS		
Adenomata	11	
Malignant	5	
Calculi	1	
	17	17
URETHRAL LESIONS		
Calculus	1	
Congenital valves	1	
	2	2
		100

The accompanying tabulation shows the distribution of the lesions causing hematuria in this series of cases. From the table it is evident that 48 per cent of the hematurias are caused by lesions of the kidney and ureter while 52 per cent come from the bladder, prostate and urethra. These figures are not at great variance with the combined statistics of several authors who give 40 per cent from the upper and 60 per cent from the lower urinary tract in over 1,000 cases.

The source of bleeding as shown in the table was found to be renal in 40 cases, ureteral in 8, vesical in 33, prostatic in 17, and urethral in 2. The importance of hematuria as a symptom of neoplasm of the genito-urinary tract again becomes impressive when we note that even in so small a series as 100 cases, the hematuria was due in 22 per cent to malignant disease, and in an additional 7 per cent to a condition potentially malignant. This figure is strikingly low compared with the findings of some authors. Chute[5] of Boston, in a series of 100 cases, found that 64 per cent of the hematurias were due to some malignant lesion of the genito-urinary tract and in a second series, 44 per cent. Thus hematuria in one case out of four indicates a malignant disease of the genital or urinary organs. It becomes a question whether we have the right to procrastinate in any case with such an important symptom. Every case presenting gross hemorrhage in the urine or persistent microscopic bleeding should be investigated with sufficient care to determine the anato-

* Read before The Webster County Medical Society, Fort Dodge, November 18, 1930.

mic point and pathologic process from which the hemorrhage originates.

Hematuria caused by a renal tumor is usually spontaneous and when first noticed is very often not severe. It is usually sufficient, however, to attract the patient's attention, either by the clots or by the brown or reddish color of the urine. The clots are occasionally elongated and worm-like from passage down the ureter. Vesical retention has been caused by large clots. If the clots are large enough they may provoke renal or ureteral colic while passing down the ureter. This colic may be severe, prostrating, and of several hours' duration, or may be only a momentary pain immediately forgotten by the patient. The bleeding usually lasts for only a few days at the most, after which the patient may go for months or years before another warning of serious disease is given.

As the malignant disease in the kidney progresses the attacks of bleeding occur more frequently and are more profuse. The bleeding may precede any invasion of the pelvis or calyces by tumor tissue. Albarran and Imbert[3] quote the case of a cortical tumor with abundant hemorrhage in which there was no communication with the calyces. To them it appears certain that in a large number of cases it is the parenchyma itself and not the tumor which bleeds. Undoubtedly the bleeding in a large portion of renal growths is due to congestion or passive hyperemia induced by the pressure of the neoplasm on the renal parenchyma. In another smaller group the bleeding probably occurs from the tumor as the result of loss of continuity of its surface.

Sudden, very profuse hemorrhage of renal origin unaccompanied by other symptoms is usually indicative of neoplasm. The duration of the period in which hematuria may be the only symptom makes it of the greatest importance in hypernephroma. Braasch,[6] in a study of 83 cases, found hematuria to have existed for more than a year in 77 per cent, and to be present in 64 per cent. It was the only symptom in 12 per cent.

In the four cases of hypernephroma in our 100 cases of hematuria bleeding was the only symptom in two. Here the duration was three days in one and eight months in the second. In the two cases associated with other symptoms, bleeding had been present nine and eighteen months respectively. These two were hopelessly inoperable because of demonstrable metastasis.

Of the three cardinal symptoms of renal tumor in the adult, hematuria, tumor, and pain, hematuria may be present for a long time before the other signs develop. Albarran and Imbert[3] found it to be the first symptom in 54 per cent, while it occurred in 68 per cent.

The successful treatment of renal malignancy being chiefly dependent on early diagnosis, the finding of hematuria is of paramount importance since it often precedes any of the other cardinal symptoms, sometimes by many months. In one report of 709 cases of renal growth with hematuria as the onset symptom in 42 per cent, only 6.6 per cent had hematuria when they came to operation, thus indicating again the lost opportunity for making an early diagnosis.

It is regrettably true that hematuria unaccompanied by other symptoms is frequently disregarded, unless by its own profuseness or duration it necessitates surgical consultation or intervention. On this fact probably more than on any other depends the unfavorable results of surgery of urogenital malignancy.

Turning our attention now to lesions of the bladder it will be seen that these comprise 33 per cent of our series. Fourteen of these were due to definitely malignant lesions, while seven were clinically benign papillomata. In other words, nearly one-half of the lesions of the bladder causing hematuria were malignant. This is a grave condition of affairs when we consider that the result of all kinds of treatment for vesical malignancy is eminently unsatisfactory.

Four of these bladder tumors were of the flat, broad-based infiltrating type while in seventeen other instances the tumors were papillomatous. Ten of these which were clinically malignant were proved so microscopically. Seven were thought to be simple or benign in type. Two of the latter had attained such size that they necessitated open operation, while the other five were suitable for fulguration through the cystoscope.

Blood in the urine is the most prominent and frequently the first and only symptom of bladder tumor. In 117 of Cabot's[2] 156 cases it was the first symptom noted. Hurry Fenwick[7] found that hematuria was the first symptom in 84 per cent of vesicle papillomata, while Israel[8] found 70 per cent.

There is nothing definitely diagnostic about blood in the urine coming from a vesical tumor, and yet the sudden painless appearance of blood when fairly profuse and without other symptoms, should at least arouse suspicion and call for a cystoscopic examination.

The bleeding may commence at any time, apparently regardless of any outside influence, and then stop as suddenly as it started. Sometimes it is more or less continuous over a long period, at others it is intermittent, the intermission varying from hours to months or years.

Occasionally patients are seen who give a history of hematuria years previously, followed by

a long lapse of time during which blood was not noted, and finally on the reappearance of the bleeding a hopelessly inoperable tumor of the bladder is found.

The degree of hemorrhage seems to be no indication of the size of the tumor. At times one will see a small papilloma bleed so profusely and continuously that the clot causes a vesical retention. The urine varies from a bright red if the bleeding is very recent, to a dark, coffee-ground appearance when the blood has been retained in the bladder longer. At times there may be only terminal hematuria. One cannot arrive at any definite conclusion as to the benign or malignant nature of the bladder growth by the severity of the hematuria. I believe, however, that when the bleeding is more or less continuous the tumor is more apt to be malignant. It has also been my experience that the hematuria in a malignant disease of the bladder is more often accompanied by pain than in the benign cases. If the bladder is inspected cystoscopically on the occasion of the first hematuria caused by a bladder tumor, invariably it will be found that the tumor is of small size and therefore offers the best opportunity for cure.

Of the seventeen lesions of the prostate gland, five were malignant and eleven of the fibro-adenomatus type with no sign of malignancy. The bleeding in the remaining prostatic case was the result of a large calculus ulcerating into the urethra. The bleeding in the prostatic malignancies is invariably a late symptom and offers no help in making an early diagnosis, while that from the benign hypertrophic group may occur any time during the course of the disease. It is not characteristic and is an unimportant factor in the diagnosis compared to other signs and symptoms. It has seemed to me that bleeding is more common in the benign than in the malignant group.

Hematuria was caused by calculus disease in twenty-three cases in our series. It will be seen that nine were renal, eight ureteral, four vesical, one prostatic and one urethral. Chute,[5] in one of his reports, finds 17 per cent of hematuria due to stone. Leon Herman,[9] in reporting 150 surgical lesions of the kidney causing hematuria, finds eighteen cases of renal calculus, four of which are associated with other lesions, eight ureteral and one vesical calculus.

In calculus disease the lost opportunity to make an early diagnosis, by failure to investigate the initial hematuria, or persistence of red cells in the urine, may not result in loss of life as in malignant disease, but often means the loss of one kidney and sometimes endangers both organs. Hematuria, next to pain, is probably the most important symptom of calculus disease of the kidney. The bleeding is often only microscopic, but is occasionally profuse. The blood in about one-third of the cases is gross and may be in the form of small clots or mixed with the urine, giving it a smoky, hazy appearance. The hematuria, unlike that caused by cancer, is always increased by exercise or activity. Thus a patient with renal calculus may pass clear urine in the morning on arising and have an increased hematuria during the day. With exercise and increase in hematuria there is often pain. Microscopic or gross hematuria in these cases is always total; that is, the first urine passed has the same amount of blood as that passed subsequently during the same act. Hematuria is not as common in cases of infected stone where pyuria is the predominant feature.

While pain is the predominating symptom in most cases of renal calculus, we have a smaller group of cases of painless, so-called "silent stone" which are thought to be symptomless. I believe, however, that if we investigate more of the microscopic hematurias we may save much of the function of the kidneys harboring "silent stones" which would otherwise be destroyed and necessitate nephrectomy.

There were eight ureteral stones in this series, three with gross hematuria and five with microscopic bleeding. Braasch[10] reports 14 per cent of ureteral stones causing gross hematuria, against 56 per cent in renal calculus. The hemorrhage from ureteral stones is not influenced by exercise as in renal calculus. There is nothing characteristic about it; it varies from macro- to microscopic, often being gross at the beginning and persisting as microscopic red blood cells in the urine after the attack of ureteral colic. Prompt investigation, diagnosis and treatment is important in this condition if we are to preserve normal renal function on the side affected.

Hematuria was caused four times by stone in the bladder. In this condition the usual and characteristic type of hematuria is the passage of a few drops of pure blood at the end of the urinary act. This is usually associated with pain referred to the region of the meatus urinarius and the pain is proportional to the bleeding. The bleeding here, as in renal stone, is aggravated by activity, the bleeding being somewhat dependent upon the vesical spasm grasping the calculus. It is often absent in prostatism or other conditions with considerable residual urine.

The one case of urethral stone in the series had only slight hematuria, the bleeding being unimportant from a diagnostic standpoint.

In simple vesical ulcer the predominant symptom may be hemorrhage; however, there is usually pain and frequency of urination with the bleeding.

Hematuria is frequently observed in cystitis, is

seldom profuse, more often microscopic and amounts at most to a smoky urine or consisting of a few drops of pure blood at the end of micturition.

Chronic nephritis was noted three times in our series and is probably one of the most common causes of small amounts of blood in the urine, but seldom is the urologist called on to make a diagnosis of this condition.

Gross hematuria is a rare finding, while microscopic blood is common in renal infections. Hematuria due to uncomplicated acute pyelonephritis is the result of vascular congestion and is rarely profuse. It was due to this condition in eight of our cases.

Occasionally we see hemorrhage very early in tuberculosis of the kidney and ureter. For a time it may be the only symptom and is very apt to be slight and transient. After the bladder has become involved the hematuria is often the symptom which causes the patient to consult a physician. The bleeding then is similar to that of ordinary cystitis, usually terminal. It may be present constantly throughout the course of the disease. It differs from that due to stone or foreign bodies in that it cannot be influenced by rest or exercise. It differs also from hemorrhage caused by tumor in that it is seldom profuse, intermittent or painless.

In our series, two cases of traumatic rupture of the kidney caused hemorrhage. It is present in 90 to 95 per cent of all traumatic injuries to kidneys. It may not be immediately manifest due to inhibition of function from the injury or because the pelvis is filled with blood-clot.

Hematuria is frequently a symptom of systemic disease. Irrespective of the nature of the disease, the renal bleeding is usually the direct result of congestion, infection or trauma, including the development of abnormal tissue or actual blood changes that alter factors associated with pathologic hemorrhage. Diseases of the hematopoietic system, blood dyscrasias, toxic agents and chronic cardiovascular diseases are common conditions causing miscroscopic and occasionally gross hematuria.

Essential or idiopathic hematuria probably means an undiagnosed lesion causing bleeding. Israel[8] in 1901 analyzed fourteen cases of essential hematuria and concluded that most of them could be shown to have organic changes in the kidney or its capsule, or abnormal mobility.

Kretschmer,[11] in 1907, after a careful microscopic study of necropsy and operative specimens from sixty-one cases of essential hematuria found fifty-two cases of positive nephritic or nephritic-like changes.

CONCLUSION

We find that even in this small series of 100 cases, hematuria has been due to malignant disease in one case out of every four and that in a number of other cases, while not due to malignant disease, indicates a condition that would eventually lead to complete kidney destruction and in some instances to loss of life as well.

We cannot procrastinate with hematuria. It is a symptom demanding immediate, careful and complete urologic investigation, as it often indicates conditions menacing the integrity of the organ involved, if not the life of the patient.

Hamm Bldg., St. Paul, Minn.

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THE DISCUSSION OF CERTAIN FEATURES OF CARDIAC THERAPY*

Fred M. Smith, M.D., Iowa City

The subject of cardiac therapy, which your committee kindly assigned me, is obviously too extensive for me to cover in the time allowed. They evidently intended to permit considerable latitude in the discussion, and I have therefore taken the liberty to select a few of what seem to be the more important aspects of the topic for consideration.

The importance of preventive medicine is rapidly becoming more appreciated and the possibilities are multiplying through the extension of our knowledge in this field. There is a tendency, however, to overlook our opportunities in the prevention of diseases. This situation prevails with reference to cardiac infection. Rheumatic fever and other forms of infection are responsible, for the most part, for the cardiac disability of early life. It is fairly generally conceded that the causative agent of rheumatism is some form of streptococcus, the streptococci are thus responsible for a large percentage of cardiac infection. These infections gain entrance into the system largely through the upper respiratory tract. The early elimination of these foci will, no doubt, greatly reduce the incidence of cardiac infection. The most satisfactory results

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will be obtained in those instances in which the foci are discovered and completely eradicated before there is a systemic invasion. Fortunately this is possible in children. It is not surprising that the results from the removal of foci of infection, after an attack of rheumatic fever, are not more striking. The recent studies of the pathology of rheumatic fever have particularly emphasized the systemic nature of the involvement. After the infection has once gained entrance into the body, the condition is comparable to other forms of systemic infection where foci, other than that originally responsible, may excite an exacerbation. The incomplete removal of tonsils increases the danger from this source of infection. Unfortunately, the tonsil tissue left is apt to be an infected portion because of its adherence to the capsule. It may then become an even greater source of danger to the patient because of the formation of scar tissue which prevents drainage. Other factors, such as diet, clothing and general habits of living, and the prevention of such infections as diphtheria and scarlet fever, deserve serious consideration.

Every infection in childhood should be regarded as a potential source of cardiac damage, and the heart carefully watched. If a cardiac infection is discovered early, it may be possible to limit the extent of the damage by adequate bed rest, and the child recover with complete restoration of cardiac function. Infections of the heart are too often unrecognized, and thus no protective measures instituted, and extensive cardiac damage results. There is justification for the belief that the incidence of significant cardiac damage may be greatly reduced by the careful supervision of children during periods of infection.

After the discovery of cardiac damage of an infectious origin, all significant foci of infection should be eradicated as soon as conditions will permit. Clinical experience teaches us that the infectious form of cardiac disease is progressive. The heart that may be insignificantly damaged by initial infection may, in a few years, be seriously crippled by repeated infections. I can recall striking improvement in the clinical course of cases following the removal of the tonsils and other infections about the head. In this connection I am reminded of the case of a young woman who was admitted to the University Hospital four years ago with high grade mitral stenosis and cardiac failure. She had badly infected tonsils and was believed to have an active infection of the heart. After the recovery from the cardiac failure and a further period of rest, the removal of the tonsils was advised. The surgeon hesitated to perform the operation because of the extent of the cardiac damage and the obvious extensive functional impairment. The patient, however, had no difficulty from the operation. Furthermore she has had no recurrence of the cardiac failure, and the heart is capable of considerable functional range. The elimination of foci of infection may, in addition, reduce the possibility of subacute bacterial endocarditis. A damaged valve is an important predisposing factor in this form of endocarditis, and the streptococcus hemolytica or viridans are the usual infective agents.

I shall now turn to the consideration of some of the features in the treatment of cardiac failure. The unsuccessful restoration of the cardiac function in the more advanced forms of cardiac failure may often be attributed to the lack of a full appreciation of the fundamental objective in the treatment. Too much reliance is placed on digitalis and the importance of rest is not sufficiently emphasized. Patients are frequently seen who have not been able to sleep for weeks because of dyspnea, yet they are allowed to be on their feet. There is no measure more essential to the restoration of cardiac function than rest. The rest must necessarily be as complete as possible and is obtained only by absolute rest in bed and adequate sleep. The patient may object and tell you that it is impossible for him to remain in bed. It is indeed, the exceptional individual who cannot remain in bed, providing it is made comfortable, and the head elevated. The condition of the bed and the elevation of the head frequently demand supervision by the physician and are essential to the comfort and rest of the patient. Sleep provides the most complete rest and should be induced, if not possible otherwise, through the administration of morphine, and continued until such simple sedatives as luminal or bromides are sufficient. Frequently, valuable time is lost by attempting to promote sleep by mild sedatives. It is our practice at the University Hospital to prescribe morphine sulphate, grains one-sixth to one-fourth at bed time with directions to repeat if necessary, for sleep. At the same time, luminal is administered in one-half grain doses after meals. Usually after two or three days, even in the severe forms of cardiac failure, the luminal is sufficient to relax the patient and induce sleep. The luminal is continued and after a few days many of the patients sleep most of the time. It is only under such circumstances that the maximum reduction of the work of the heart is attained through rest. Sleep is essential to this objective, and unless it is possible there is little hope of restoring the cardiac function.

The diet is another factor commonly overlooked. Frequently no attempt is made to prescribe a suitable diet, and the patient is allowed to choose from

the menu prepared for the family. It is generally recognized that the condition of the gastro-intestinal tract may greatly influence the function of the heart and that overloading of the stomach promotes the onset of cardiac failure. In advanced cardiac failure the engorgement of the digestive organs is an important feature and their function is necessarily impaired. The loss of twenty to thirty, or even forty pounds during a prolonged period of cardiac failure has frequently been observed. This feature alone not only directs attention to the necessity of food, but indicates the importance of providing it in a form that may be utilized at the minimum expense to the body. During the investigation of this subject a few years ago, we demonstrated that it was frequently possible to eliminate the excess fluid in patients with general anasarca by change in diet alone. These were all patients with advanced cardiac failure, and during the control period of seven to nine days, received the usual treatment except for diet. If at the end of this period there was no appreciable change in the weight, the cardiac diet was prescribed with no other alteration in the treatment. In many instances there was a rapid loss in weight with the elimination of the excess fluids. This diet provides from 2,000 to 3,000 calories, depending on the stage of the treatment and the needs of the patient. The protein in the beginning of the treatment is reduced to about 60 grams, or that calculated to maintain a protein balance and is provided, for the most part, by milk. The bulk of the diet is prescribed in the form of carbohydrates, increased by the addition of sugar. In the beginning, the diet consists chiefly of milk, cooked cereals, and fruit juices, and the fluid intake is limited to 1800 cc. Later, pureed vegetables and fruits are added. In some instances, the recovery seemed to be promoted by increasing the energy value of the diet to above 2500 calories. We have employed this diet for about four years and believe that it has materially contributed to our success in the treatment of advanced cardiac failure. There is seldom the neccssity of prescribing laxatives. A weight loss of twenty to forty pounds through the elimination of excess fluids is frequently observed without prescribing a single laxative.

It is not my intention to discuss digitalis therapy. Certain aspects of this form of treatment, however, deserve brief mention. I have never advocated the administration of large doses of digitalis, and our results with the most advanced forms of cardiac failure justify this stand. We seldom prescribe more than 20 to 25 minims of the tincture of digitalis three times a day, and I shall show you the weight curves of patients who lost from twenty-five to fifty pounds through the elimination of excess fluid and who, during the entire course of treatment, never took more than 15 minims of the tincture three times a day. If the patient failed to improve with digitalis in the above amounts, rarely has it been possible to promote recovery by increasing the dose. In general, however, the dosage of digitalis is more apt to be too small, rather than too large. Frequently the dose is reported to be 10 to 15 drops three to four times a day, which, when reduced to minims, will range from 7 to 10 minims. This dose is not sufficient in cardiac failure unless the patient has previously been taking larger amounts. The drop method of prescribing digitalis is very unreliable unless the dropper employed is checked with a minim glass. The physician is always certain of his dosage if he prescribes in minims and indicates a minim glass on his prescription.

The beneficial effects of digitalis in auricular fibrillation are frequently overlooked. Auricular fibrillation is the most common form of absolute irregularity associated with cardiac failure. The cardiac rate is not only excessive, but very unstable and the efficiency of the heart is thereby greatly reduced. We have, in digitalis, a means of reducing the heart rate to the desired level which is most effective between 70 and 90 per minute. The physiological effect of the drug is indicated by a reduction in the cardiac rate and should be continued in sufficient amount to maintain the above level. The mistake is often made of discontinuing the digitalis and allowing the return of the excessive cardiac rate. The efficiency of the heart is again reduced, which often permits the return of the cardiac failure. The amount of digitalis required to maintain a reasonable cardiac rate in auricular fibrillation varies with the individual. In some, a continued administration may be necessary; in others, periodic use of the drug may be sufficient. The amount, however, is readily determined in any given case, and this is just as important to the well being of the patient as insulin is to the diabetic. After a period of supervision the patient is capable of regulating the dosage. He must be impressed, however, with the necessity of the continued or periodic use of the drug, according to the needs in his particular case, otherwise he will most certainly have a return of the cardiac failure.

In the majority of our patients, an arteriosclerosis is a factor in or the basis for the cardiac failure, and there is frequently an associated hypertension. We routinely employ, in patients of this type, a theophyllin preparation, regardless of whether or not there is edema. Either euphyllin or theocin is prescribed, the former in tablets of one and one-half grains, and the latter in capsules

of two to three grains three times a day. It is generally known that theophyllin is the most powerful diuretic of the purine base group which includes caffein and theobromin. These drugs have a direct action on the heart, probably through their effect on the coronary arteries. In a series of experiments, both on the isolated and the intact heart, we have demonstrated that theophyllin increases the volume of the coronary circulation from forty to sixty per cent. Theobromin is much less effective, and caffein has no significant action in this direction. On the basis of these experiments we have employed theophyllin, therapeutically, for five years. Theocin, the synthetic form of theophyllin, is frequently prescribed. This preparation is generally regarded as irritating to the gastro-intestinal tract and the kidneys, and is usually discontinued after one or two days. This is for the most part an erroneous conception. We frequently prescribe this preparation in doses of two to three grains three times a day throughout the period of hospitalization and often continue the medication after returning home. Seldom has there been observed a disagreeable effect on the gastro-intestinal tract. Rarely is it necessary to employ other forms of diuretics. With few exceptions, in those instances in which we have not been successful in eliminating the excess fluid, the other forms of diuretics have failed.

In the treatment of advanced cardiac failure, it is essential that every possible means be directed towards reducing the load on the heart. The importance of absolute bed rest and sleep have been emphasized. In an occasional instance, particularly in the cyanotic plethoric individual with hypertension, a venesection is a very worth while measure. The removal of excess fluid from the pleural and peritoneal cavities are other procedures which may be utilized in relieving the heart of excess work. In patients with hypertension, striking results are often obtained by a moderate reduction in the blood pressure through the administration of nitrites. I have frequently seen patients with hypertension and extreme form of dyspnea who were made relatively comfortable by a hundredth of a grain of nitroglycerin under the tongue. In patients of this type we often prescribe a hundredth grain of nitroglycerin under the tongue every two hours while awake. The heart is temporarily rested by the reduction in blood pressure and there is probably an additional beneficial effect through the dilating action of the drug on the coronary arteries. The patient is furthermore better able to relax, and morphine is rendered much more effective in inducing a restful night's sleep. Other forms of nitrite may be employed, and the desired objective obtained. They are seldom continued after the cardiac function is restored, but are regarded as a particularly desirable aid during the crises of cardiac failure. This measure is illustrative of another possible means of reducing the work of the heart and thereby promotes the restoration of the cardiac function.

SUMMARY

It is believed that the cardiac disease of early life may be greatly reduced by the early elimination of foci of infection about the upper respiratory tract. After the onset of a rheumatic fever, which is indicative of a systemic invasion, the heart is very likely to be damaged, and the chances of preventing a recurrence of the infection by the removal of foci are reduced.

The importance of a prolonged period of rest, the employment of measures to improve the general health, and the later elimination of foci of infection not only afford the maximum protection to the heart, but provide the most satisfactory means of promoting recovery from the disease. In general, the importance of the extended period of rest, regardless of whether or not there is cardiac damage, is not sufficiently appreciated. During the period of chronic valvular heart disease, the individual should be protected against recurring infections which are chiefly responsible for the progression of the cardiac disability.

The formula, briefly outlined, for the treatment of cardiac failure is simple and has proved to be effective. Absolute rest in bed, sleep, and relaxation are essential to the restoration of the cardiac function in the advanced forms of cardiac failure. Other possible means of reducing the load on the heart, as the removal of fluid from peritoneal and pleural cavities, venesection, and the administration of nitrites when there is an associated hypertension, should always be considered. The importance of the diet has been demonstrated. The administration of large doses of digitalis is not believed to be necessary. When the tincture is employed it should be prescribed in minims. The theophyllin preparations are particularly effective in the arteriosclerotic form of cardiac failure.

Discussion

Dr. Walter L. Bierring, Des Moines—I feel I cannot do better than to emphasize the suggestions that have been made in this very rational paper. There can be little doubt that rest during an infectious disease and afterwards is very necessary in children to prevent future cardiac disorders. The establishment of schools on a one or two story basis with no more stairways than necessary has aided greatly in complete recovery from infectious diseases, and the prevention of heart disease. We all know the influence of a preceding valve lesion upon a subse-

quent endocarditis. There can be little doubt that in all those cases where a valve lesion exists every precaution should be taken to prevent subsequent acute infections, particularly in the upper respiratory tract, as well as to remove all possible foci which might further accentuate or promote a subacute infection of a previously damaged endocardium. Within recent years there has been a tendency to use digitalis in much smaller doses, and the original plan of early and complete digitalization does not now seem necessary. There is no question that the use of an opiate early in a condition of heart failure has a distinctly stimulating effect, and in fact everything that can promote rest of the insufficient and weakened myocardium adds to the comfort of the patient.

The early English writers called attention to the value of sugar in the diet in heart disease, and it is interesting to see to what extent Dr. Smith has developed this idea in his diet regimen. There seems to be little doubt that the use of the carbohydrates and particularly the sugars has a marked influence in stimulating the myocardium as well as the circulation as a whole, although the explanation for this is not very clear.

There is good reason for using a diuretic of the theophyllin type because of its influence upon the coronary circulation. Promoting coronary blood flow tends to lessen the cardiac or circulatory load. In all forms of heart failure the object should be to lessen in every way the labors of the heart, by rest of the myocardium and relief of visceral congestion and other symptoms of circulatory embarrassment.

Dr. Granville N. Ryan, Des Moines—Mr. President: I consider this subject an unusually interesting one and I desire to compliment Dr. Smith for this most excellent address. It is my desire to stress one point that I think is frequently overlooked, and that is the necessity for carefully directed graduated exercise during the stage of convalescence and for some time after the patient is allowed to take the various forms of mild exercise, such as golf, and so forth.

In this class of cases one should make vital capacity tests and carefully inform the patient of his limitations.

Dr. Donald Macrae, Council Bluffs—I don't think what I am going to speak about right now pertains to the subject as directly brought before you, yet we are talking of heart lesions. As a surgeon I would like to tell you that in the past year we have cured some thirty-two or thirty-three heart disease cases, or rather cases that had been treated as such for from two months to a year and one half, by a very simple operation, and they are well. I refer to operation for removal of the thyroid gland—thyroidectomy. I wish that everybody here when he sees a heart case would at least think of the thyroid before he considers anything else, because there are many patients today, being treated for heart disease, who have toxic thyroids.

ACRODYNIA*

A. Fred Watts, M.D., Creston

Rather than to present any new or startling information, the purpose of this paper is more to stimulate interest in acrodynia and thereby possibly avert some of the misery and suffering caused by this disease. Acrodynia has been known for some time in Europe, but our knowledge in this country has been limited to comparatively the last few years.

Our first report in recent years came from Bilderbock[1] in January of 1920. This was soon followed by a paper by Weston[2] in April, 1920, and in November, 1920, Byfield[3] of Iowa City reported a series of cases with a very excellent description of the malady. Since that time there has been a number of articles in the literature, but very little has been added to the description of the disease, although the striking similarity of the numerous reports convinces us that this must be a clinical entity.

At the time of the early reports in this country, it appeared that acrodynia was a new disease, but Swift[4] of Australia in 1914 reported fourteen cases as "erythredema," and Wood[5] of Melbourne in 1921 reported that he had observed such cases for thirty years which he called "raw beef hands and feet." Because of the peculiar skin changes Littlejohn[6] of Sidney described this condition as "pink disease."

What at first seemed to us to be an aftermath of the influenza epidemic was found to have been long recognized and classified under these various names. In all probability we have always had the disease.

The first change noticeable at the onset of the disease is the altered disposition of the child, which is characterized by combinations of extreme mental irritability, depression and drowsiness. The characteristic position of the child is lying on the hands and knees with the face buried in the pillow, or if sitting, with the head dropped almost between the knees and the eyes closed. Sleep is irregular and restless, both day and night. The child cries a great deal and is constantly rubbing the feet and hands.

ETIOLOGY

The exact cause of the disease is still under discussion but the majority of writers in recent years have been more or less in accord on the idea that it is the result of focal infections. This is borne out by the fact that the greater number of cases are seen in the winter and early spring months, or following the season of our greatest upper res-

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piratory infections; also by the fact that there is invariably an improvement following relief from these infections.

DIAGNOSIS

Acrodynia if seen in a moderately advanced stage should give little difficulty in diagnosis. Pellagra is the only disease with which it might be confused, but the following differences would make a diagnosis easy:

1. Lack of a sharp line of demarcation in the skin lesion.
2. Uniform age of the patient. All acrodynia patients are young.
3. Lack of a definite dietary error.
4. Absence of digestive symptoms except constipation and anorexia.
5. Lack of recurrence in cured cases.
6. Frequent history of infections.
7. Duration of subjective symptoms.

SYMPTOMS

The onset of the condition may be gradual or sudden. At first the child becomes peevish, fretful, loses his appetite, and sleeps poorly. In some cases the rash is first seen on the nose and cheeks. The skin is cold and clammy to the touch. Coincident with the rash there are often irritating sweats and the eyes become irritated and sensitive to light. The patient becomes pale and emaciated, the hair is dry and thin, and is often pulled out. There is almost constant rubbing of the hands and feet. The patient lies with his head buried in the pillow.

Cutaneous System. The skin manifestations are most uniform and most diagnostic. They consist of a uniform involvement of both fingers and toes and, to a less extent, of the hands and feet. It is erythematous in character, recurring at intervals or remaining constant. The erythema fades at the wrists and ankles although there is no sharp line of demarcation. There is some pin-point desquamation of the palms and soles which invariably extends to the finger tips and along the nail margins. The eruption fades as the general condition improves. The extremities are invariably edematous, but there is no pitting on pressure. The trophic changes in the skin may at times become severe and result in gangrene of the fingers or deep ulcers on the toes and soles.

Hair. The hair is dry and tends to fall out. There is tendency on the part of the child to pull out the hair by the handfuls.

Teeth. There was loss of teeth in some of our cases without apparent pathologic changes in the gums.

Nails. There was very little change in the nails in our series of cases, but some writers call attention to changes in color and not infrequently to shedding of the nails of both fingers and toes.

Gastro-intestinal. An extreme and obstinate anorexia was a prominent factor in the clinical picture. The gravity of the symptom can be realized when I tell you that it was the failure to overcome this symptom that accounted for death in some of our earlier cases. Diarrhea and vomiting were seen occasionally, but were not prominent symptoms. Emaciation to a more or less degree was noted in all cases. Extreme thirst was usually present.

Genito-urinary Tract. The severity of the involvement of the kidneys and bladder varied. Most of the cases experienced frequent and painful micturition. Pyelitis, while often present, usually yielded readily to treatment. Aside from the pyuria of pyelitis and cystitis there was nothing characteristic in the urine.

Nervous System. Irritability, restlessness, insomnia, and trichotillomania occur in all cases. Paresthesia of the fingers, hands, toes and feet is invariably present. One patient would always hold up his feet to have them rubbed by anyone who came into his room. Diminished pin-prick sensation was noticed in several of the cases. Deep reflexes were all diminished.

Eyes. There was photophobia and conjunctivitis present to a marked degree in all our series of cases. So severe were those symptoms that the child would lie with his head buried in the pillow or if raised would always keep the eyes closed.

Circulatory System. The heart, if involved, was a secondary consideration. There was always a certain degree of secondary anemia. The leukocyte count varied from 9,000 to 30,000. Red count was not altered.

LABORATORY TESTS

The Wassermann test was always negative, both for the blood and spinal fluid.

The tuberculin test was negative.

Blood cultures were negative.

Feces negative for parasites.

PROGNOSIS

The outlook for recovery is good unless some complication takes place, provided of course that the focal infections are corrected. Bronchopneumonia is the most common complication.

TREATMENT

The most difficult problems in treatment of these cases are: (a) feeding, (b) relief from pain, (c) insomnia, (d) anorexia.

Feeding should be carried out as in any difficult feeding case, with forced feeding and if necessary, gavage.

Relief from pain is one of the most difficult features. Frequent applications of cold calamine lotion to all irritated surfaces give temporary relief. Little is to be expected from bromides and chloral.

Insomnia is dependent largely upon the paresthesia. Relief from these symptoms usually corrects the insomnia.

Anorexia is best treated by frequent feedings of small amounts.

Nearly all writers agree that the treatment is symptomatic. The early cases lacked proper treatment mostly because of lack of proper diagnosis. In the first few who received surgical treatment, it was given, not for cure, but to relieve the child of a persisting upper respiratory infection. The prompt recovery was more of a surprise than an anticipation. Later cases had early removal of the tonsils and adenoids and consequently recovered early from the disease.

Craig[7] and Sweet[8] have both reported good results with the use of the quartz lamp. McClendon[9] reported a case treated with yeast and irradiated ergosterol, with good results. Butler[10] reported good results from vaccine prepared from diplococci discovered in the lymphatic glands.

One man's treatment seems to be as good as another's, but when all is said and done, the treatment of any particular case rests upon the cure of the focal infections, and restoration of nutrition.

CONCLUSION

In conclusion I do not believe I could give you any better summary than that drawn by Rodda:[11]

1. Acrodynia is a disease of infancy and early childhood, which is preceded or accompanied by an upper respiratory infection and which presents three groups of symptoms in varying degrees and combinations:

General:
- Anorexia
- Loss of weight
- Weakness

Nervous System:
- Hyperirritability
- Sleeplessness
- Paresthesia
- Anesthesia
- Loss of reflexes
- Paresis
- Photophobia

Dermatologic:
- Hyperhydrosis
- Erythema
- Desquamation
- Swelling
- Coldness of hands and feet
- Alapecia
- Ulceration
- Loss of teeth

2. In all probability it is the result of a focal infection, most usually of the tonsils and adenoids.

3. Although the dermatologic findings are pathognomonic, the disease should be suspected in cases of unexplained, persistent hyperirritability and hyperhydrosis; removal of the tonsils and adenoids at this stage may abort the disease.

4. Speedy recovery has resulted in all our uncomplicated cases where tonsils and adenoids have been removed.

CASE HISTORIES

In presenting case histories I do not care to burden you with any number, therefore I will read but two, in which practically all the symptoms are recorded.

Case 1.

This was a little girl three years of age who was brought to the office on February 1, 1920, because of weakness, anorexia, pain in the extremities and a persistent temperature. The early history, both family and personal, were negative until the beginning of the present illness four months before. The parents thought the pains at first were "growing pains." The child wanted her shoes and stockings off because of distress. One month after the beginning of the trouble an eruption was noticed on the hands and feet, later on the body. This disappeared for about a week, with desquamation, and then reappeared. For the past month the child had become much weaker until she could not rise nor feed herself.

Physical Examination: We found a very weak, extremely emaciated child in a partial stupor. There was a profuse nasal discharge. The lungs were consolidated and full of rales. The hands and feet showed the characteristic popular eruption on an erythematous base. The finger tips were desquamating. Coldness of the extremities was marked. Some eruption showed on the body and there were many scratch marks. Reflexes at the knees and ankles were lost.

Laboratory findings:
- Leukocyte count 11000, poly. 61 per cent.
- Tuberculin test positive.
- Urine showed acetone and diacetic acid and many pus cells.
- The nasal discharge culture showed a diphtheria-like bacillus.

This child died two weeks later from pulmonary tuberculosis.

Case 2.

On February 26, 1926, this patient, a little girl of two years, was referred by the ear, eye, nose and throat specialist to whom she had been brought because of "sore eyes." Other complaints were loss of weight, anorexia, nasal discharge and fever.

The child had always been well until two months

before when she had what was diagnosed as influenza by the family physician. From that time on she had been gradually losing ground, and for the past six weeks had been treated for blephoritis.

Physical examination presented an emaciated child of normal intelligence. The hair was dry and scanty. The cheeks were sunken because of malnutrition. The child was sniffling constantly because of the profuse nasal discharge.

The tonsils were moderately enlarged and diseased. The cervical glands were all palpable. The heart and lungs were negative. The abdomen was scaphoid. Reflexes were present but sluggish. The skin was dry but there was no distinct rash; there was a slight redness of the hands and toes. The child slept practically none at all. She was irritable and was constantly wanting her mother to hold her, or she was depressed and drowsy. Photophobia was the most pronounced symptom. The eyes were kept closed constantly and when sitting the head would hang almost between the knees. Sweating was profuse. Parethesia was troublesome. The child kept the mother busy rubbing the hands and feet.

Following tonsillectomy and forced feeding the child made an uneventful recovery.

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Discussion

Dr. Roland W. Stahr, Fort Dodge. Members of the State Society: Dr. Watts has given us a very fine resumé of the subject of acrodynia. We probably have a long way to go before we will know the cause of this disease and until that time will be content to treat the symptoms. In the literature at present there is a wide variation in opinion as to how these cases should be treated as well as a wide variation in the results obtained. One group of men on a certain group of cases will find relief in tonsillectomy and adenoidectomy. Others using the same procedure with apparently similar cases get no relief.

There are certain observers who have been using yeast and irradiated ergosterol in treating these cases from the standpoint of avitaminosis. From meager personal observation this treatment will alleviate the symptoms, but as soon as the vitamin concentrates are stopped the symptoms return.

It is strange that in this disease as in so many others long recognized, many of us fail to recognize acrodynia. It is almost universally true that when you see a case of acrodynia there have been at least five or six other men who have seen the patient and have failed to make a diagnosis. It is certainly to be regretted that with this paper there was not at least one case of acrodynia to be shown here, because once you see a patient having acrodynia it is a picture difficult to forget. They present the picture of abject wretchedness which is seen in few other conditions.

Dr. J. F. Herrick, Ottumwa. I have been greatly interested in this paper, because I have seen a few cases of acrodynia. I want to report the first case I saw. The patient, a little girl two and one-half years old, had had what was supposed to be an influenza, and had developed what her attending physician thought was scarlet fever. She had a universal skin eruption, or rather a redness. When I saw her she had this eruption but not to the extent that she had had it previously. She had the typical symptoms, the red cheeks, the white chin and mouth very much like scarlet fever. She had the scaling of the feet with the fundamental redness and the papillary eruption. She had a redness of both hands with sloughing of the finger ends, two fingers sloughed off at the first joint. She was in a desperate condition. She had a most typical hooked-over appearance that has been described here. She was emaciated, and had bronchial rales all over both lungs, there was no question about having a bronchial pneumonia.

The case was so striking and so advanced that it seemed that there was hardly any chance of her geting well. Her temperature was 105 when she came into the hospital. That is something that has not been mentioned here today, the high temperature. A spinal puncture showed a pressure of 60 millimeters of mercury. Forty cubic centimeters of spinal fluid were taken from this child two and one-half years old before the pressure came down to 10 millimeters of mercury. I stopped at that for fear of some evil consequences. The child was immediately relieved. She straightened up and called for something to eat. The temperature within a few hours dropped down to 101. In two days a spinal puncture was made again because the symptoms had returned. The pressure then was 48 millimeters of mercury and 30 cubic centimeters of fluid were drawn off. There was immediate relief. After four or five of such punctures the mother begged for another spinal puncture whenever the baby got worse and cried more. There was quiet sleep after each puncture for two to five hours. This was repeated until seven punctures were made, the pressure coming down with each one, improvement following each puncture. At the end of two weeks the child was convalescent and the pneumonia was gradually getting better. The child recovered.

She is now about twelve or thirteen years old, but she has shown a defective mental development, and I am inclined to believe that the doctor's illustration here today of this hydration of the brain is the cause of such failure.

Dr. Temple Fay, Philadelphia. Mr. President and Members of the Iowa State Society: I am afraid if I bring before you my own views on this problem it will

offend the pediatrists particularly, but I am convinced that we are giving these children too much liquid in the diet and forcing fluids far beyond the limits of safety. Children with conditions which primarily do demand increase in fluids (that is toxemias due to infections) are being hydrated to a tremendous degree because of the old theories that fluids were good and washed out the toxins. They represent the same problem of cerebral edema and pressure that we see in the posttraumatic case. In the toxemias, this fluid fails to be properly eliminated, and Dr. Winkelman has shown the same changes in these pacchionian structures that you find in the inflammatory reactions. If you force fluid on a child at that stage you find what has been brought forward this morning, high intracranial pressure, and increased spinal fluid. The fluid volume, as I understood, amounted to 40 c.c.'s in the first instance before the pressure was reduced to normal. That 40 c.c.'s of volume may just as easily represent 40 c.c.'s of volume of brain lost because the cranial cavity in all probability had not increased in size. If that child had a hydrocephalus and an increase in the size of the cavity, then we could account for the 40 c.c.'s, but you cannot introduce 40 c.c.'s of fluid into a closed quart jar or a closed system of any sort without increasing the space therein. The blood vascular system requires a certain amount of that volume; the part that suffers is the brain, and that brain suffers atrophy just as rapidly as constant pressure produces it in the periphery. The only difference is that in the arms or legs and the periphery there is a possibility of regeneration. There is no possibility of regenerating a single nerve cell of functional use within the brain after its destruction. Once lost, it is always lost.

The mental defective problem is filled with this same story of pressure atrophy of the brain. We are turning mental defectives back into the community. From the administration of large quantities of fluid where there is a defective cerebral drainage mechanism, we are turning back economically poor individuals who are not able to maintain their mental or physical status, and who will probably eventually be institutionalized.

The problem would be a simple one if we could visualize the structures; if we could remove this skull and watch what is transpiring within, we would see what Forbes and Wolf saw through the glass window to the brain. It no longer becomes a mystery as to why some of these individuals never do reach a stage above the moron type after they have gone through a severe illness in which we have always felt in the past, and still probably will in the future, that fluids are a most important factor. They are usually overhydrated, suffering long periods of cerebral edema and pressure.

The very factors of pressure and volume in this case, I believe, illustrate the problem again; that is, we cannot afford during acute illnesses or during periods of obstruction to force fluids beyond the compensation of either the kidney or the cerebrospinal fluid mechanism.

Here is the solution of the problem. If you are going to force fluids, and you necessarily have to because of certain toxemias, you must do repeated spinal punctures as advocated and proved to be effective in this case. Spinal punctures have no danger if properly done, and release of this trapped fluid will give a release of hydraulic pressure over the brain and you will preserve the brain. The risk of the puncture when carefully done is nothing compared to the economic loss you will have in the individual if you allow the pressure to actually destroy the most important mechanism man has developed.

I very much enjoyed hearing the case and hearing the discussion. I think here again we have a problem of hydraulics. As I say, I may tread upon the toes of the pediatrists regarding feeding formulas, but we are handling problems of this sort after the initial spinal drainage by cutting the child's formula to twelve total fluid ounces a day. The pediatrists have told us it would be fatal, or at least it would be very detrimental to the child. That has not proved to be the case. We will take up the problem of dehydration tomorrow afternoon, but certainly these children thrive on a caloric value of around 400 calories, and a fluid of twelve ounces means that their feedings, instead of being liquid, are thick and contain the necessary substances for a body as small as a six weeks old baby. It is possible to control the fluid intake in infants by feeding proper mixtures of farina, mashed banana, mashed potatoes, condensed milk and special protein mixtures along with the needed salts and vitamins.

Dr. A. Fred Watts, closing. There are about 200 cases of acrodynia reported in the American literature. So far as I can find every one has had the photophobia. As to the patient discussed by Dr. Herrick, I saw seven of these cases with Dr. Byfield in the series he reported in 1920, and in that series we had no increase in the pressure of the cerebrospinal fluid in any of the cases, and the cell count was normal. I am just wondering whether or not Dr. Herrick might have gotten hold of a case that had a cerebral infection.

Dr. J. F. Herrick, Ottumwa. I was talking with Dr. Byfield about that and he told me at that time that the pressure had not been measured.

Dr. Watts. Some of the earlier ones had not. Maybe he was speaking of the early series. I should mention also that in one case upon which Dr. Byfield made a post mortem examination, there was a gliosis. Paterson, I believe it was, posted one and he found a definite involvement of the peripheral nervous system, so there is a definite nervous manifestation or involvement in these cases.

SEVERE ANEMIA OF PREGNANCY*

T. A. Moran, M.D., Melrose

In 1842 Walter Channing, an obstetrician of Boston, was the first to describe this complication of pregnancy, to prophesy the possible value of

* Read before The Wapello County Medical Society, September 16, 1930.

blood transfusion as a therapeutic measure and at the same time to sound a warning as to its possible dangers. Very little was known of the value of blood transfusion as a therapeutic agent at that time.

This form of anemia occurs only in pregnancy, is not due to hemorrhage or other wasting diseases, and usually occurs in the third trimester of the pregnant state. It is a separate clinical entity and has no connection whatever with the form of anemia described by Addison, commonly called pernicious anemia or Addison's anemia.

William Allan, in an article entitled "Hemolytic Anemia of Pregnancy," in the November, 1928, issue of *Surgery Gynecology and Obstetrics,* speaks of it as an acute hemolytic anemia of pregnancy which occurs in women under thirty-five years of age, progresses steadily without remission, to death or recovery, and is curable by blood transfusion. He contrasts it with primary anemia, in that the latter is more common in the male, essentially chronic, occurs after the age of thirty-five, is characterized by remissions, and is not curable by blood transfusion. This form of anemia has no relationship to the anemia which occasionally occurs during the puerperium and which is probably due to sepsis.

The type of anemia we are discussing always begins during the latter months of pregnancy, and is never curable until after the uterus is empty, although convalescence may not be established for several months after delivery, as in the case we are reporting. It is a rare disease and many physicians with a large obstetric practice have never seen a case. For that reason only, I am not apologizing for imposing this paper upon you and for reporting this case. William Evans, first medical assistant and registrar of the London Hospital, investigated the records of Queen Charlotte's Maternity Hospital and reported 4,003 labors in the years 1926-27, but not a single case of severe anemia of pregnancy was disclosed.

V. C. Rowlan of Cleveland, Ohio, in a paper published in the *Annals of Internal Medicine,* for September, 1927, says that he reported in the *Journal of the American Medical Association,* in the February issue of 1924, two cases of severe anemia of pregnancy. Up to that time, the condition as a clinical entity was unknown to the obstetricians of Cleveland, but in the three years following, four cases were reported.

While the blood picture of severe anemia of pregnancy and primary anemia may resemble each other very closely from a clinical standpoint, there is only the similarity between them that is common to all forms of anemia. They are entirely separate entities, one being curable by blood transfusion and the other held in check and possibly cured by the liver treatment, as described by Minot and Murphy. In the case we are reporting there was very little similarity between the two diseases, either in the blood picture or in the clinical symptoms.

Before arriving at a diagnosis of severe anemia of pregnancy, we should carefully exclude other diseases in which anemia is a prominent symptom. Some of these are primary anemia, anemia due to hemorrhage, menorrhagia and metrorrhagia, concealed hemorrhage as from internal hemorrhoids, ectopic pregnancy, sepsis in the puerperium, malignant endocarditis, tuberculosis, syphilis, cancer, and acute lymphatic leukemia.

After an extensive review of the literature, from which the following reports are compiled, the proposition that every pregnant woman has anemia in some form, at some time during her pregnancy, seems to be well established. It may be of a mild form with a hemoglobin estimation of 75 per cent and an erythrocyte count of 3,500,000; or a moderately severe type, in which the hemoglobin ranges between 45 per cent and 75 per cent and the erythrocytes from 2,500,000 to 3,500,000; or the severe type in which the hemoglobin tests as low as 20 per cent and the red cell count as low as 700,000.

Edward C. Lyon, Jr., in an article in the *Journal of the American Medical Association,* dated January 5, 1929, reported a study of the blood in two hundred pregnant women in the last trimester of their pregnancy. No examination was made before the twenty-eighth week; one hundred seventy-seven of this number had a blood examination at term. The majority of the women were from working families who lived simple lives, had good substantial food and good living conditions. The patients were taken at random as they reported to the clinic or to the hospital for admission, and were in no wise selected. Their ages ranged from seventeen to forty-five years. One hundred twenty-five of this number were between the ages of twenty-one and thirty. One hundred thirty were primiparas, sixty-nine were multiparas. In two the Wassermann reaction was positive, while in three of the number the Wassermann reaction was indeterminate. Five of the number were not examined for syphilis. It would seem that this was a fairly representative group for study.

Of the one hundred seventy-seven women examined at term, the average hemoglobin estimation was 75.3 per cent. In fifteen of the group the red cell count was practically normal, while the hemoglobin ranged from 15 to 90 per cent. In fifty-seven of the group the hemoglobin was

70 per cent or below, and the red cell count 3,500,000.

Charles Edwin Galoway of Chicago, in a report in the *American Journal of Obstetrics and Gynecology* for January, 1929, of two hundred forty-three blood examinations made by him during all months of pregnancy, found the average hemoglobin estimation to be 71 per cent and the average red cell count taken from one hundred ninety-four women under the same conditions to be 3,660,000.

Kerwin and Collins of St. Louis, in an article in the *American Journal of Medical Sciences,* for October, 1929, entitled "Hemoglobin Estimates in Pregnancy," reports 83.1 per cent in thirty cases examined in the first trimester, 83.2 per cent in eighty-eight cases examined in the second trimester and 82 per cent in eighty-six cases examined in the third trimester of pregnancy.

P. Brooke Bland and Leopold Goldstein, in an article in the *Journal of the American Medical Association,* dated August 24, 1929, entitled, "Anemia in Pregnancy with Recovery," report fifty cases of the mild and moderately severe forms with hemoglobin estimates varying from 40 to 78 per cent and erythrocyte counts varying from 2,600,000 to 3,980,000. Ninety-two per cent of this number made a spontaneous recovery within six months after delivery with no particular treatment.

H. C. Graham reports fifty-eight examinations made during the three trimesters of pregnancy with an average hemoglobin of 71 per cent in the first, 72 per cent in the second, and 79 per cent in the third.

From the foregoing review, it would seem that an impoverished condition of the blood exists in nearly every pregnant woman. Yet only a very small percentage suffer from the severe or hemolytic form of anemia. It would seem that the logical deduction would be that the milder form of anemia is not a precursor to the severe or hemolytic form, and that it is in reality a separate clinical entity. Neither does a review of the literature for the past five years show that the disease is more prevalent in the multipara, worn by repeated pregnancies, than it is in the primapara. On the contrary, women under thirty-five are more susceptible than women over that age and it is more prevalent in women who have had one or two pregnancies than in women who have had repeated pregnancies. Repeated pregnancies are not factors in its causation. A number of theories have been advanced as to its etiology, but in the light of our present knowledge one man's guess seems to be about as good as another's.

One of my colleagues, Dr. J. F. Herrick, of Ottumwa, Iowa, suggests the following hypothesis as to the etiology. "In reading over your paper, I was struck by the fact that this seemed to be a specific type of anemia, found only in pregnancy, and then only in the latter months. This suggests that there is a connection between the anemia and some condition or process taking place within the mother. Some years ago I had occasion to become interested in the chorion and chorioepithelioma, a diseased condition resulting in, or following abortion, in a certain number of cases. The chorion in those cases takes on some peculiar characteristics. It may not only invade the decidua but even the uterine wall and sometimes gets into the blood and metastasizes in other parts of the body. It appears to have the faculty of digesting or absorbing adjacent structures to some extent. While this process takes place in some degree in every pregnancy, it becomes excessive and thus abnormal in only a few cases.

"Doctor Edgar, in his work on obstetrics, says: 'Interesting and important formations in the placenta are the intra-villous spaces. The decidua vera is abundantly supplied with a network of blood vessels which as we have seen, are entered by the growing villa of the intra-villous spaces. These are really large sinuses or lacunae of maternal blood, *the endothelial cells of which have disappeared.* As a result of this change the branched chorionic villi extend freely into an almost continuous sinus of maternal blood, bridged by villi, the tips of which are imbedded in the decidua.'

"Again he says: 'The villi extend into the uterine mucous membrane in such a way as to indicate that epithelium, glands, and walls of blood vessels in their path have been disintegrated so that they are not merely pushed aside, but protrude freely into the maternal blood.'

"Without going farther into the subject, it would not seem far-fetched to suppose that the digestive juice or ferment that makes it possible for the chorion to invade and dissolve tissues, may not by entering the blood stream be the cause of the commonly found anemia of pregnancy, and that in an occasional case such as yours, the chorionic penetration has been more extensive; so much so, as to profoundly affect the patient. That would explain the gradual recovery of the patient after delivery and it seems to me would explain the benefit from transfusion."

The following case which occurred in my practice during the past year will be of interest in stressing some of the points brought out in this paper:

Mrs. H, a housewife, aged twenty-four, had been married four years. She had one child two and one-half years of age, in good health. She

had the usual diseases of childhood, and typhoid fever when seven years of age. There were no complications nor sequelae. Both paternal and maternal grandparents lived to old age. There was no blood dyscrasia in family. The patient aborted February 21, 1928, at the fifth month of gestation without determinable cause. She had a slow but uneventful convalescence.

When I saw her she was in the seventh month of her pregnancy. She gave a history of a recent attack of influenza, to which she attributed her present illness. Skin and mucous surfaces showed extreme pallor. She had a very severe and obstinate cough, difficult to control, which was a very annoying feature throughout her entire illness. She complained of some emesis, extreme weakness, ringing in the ears and shortness of breath.

A systolic murmur, which was probably hemic, could be heard over the precordial region. A few dry rales could be heard at the base of both lungs posteriorly. The dome of the uterus was palpable midway between the umbilicus and the xiphoid tip of the sternum. The liver and spleen were both palpable.

Blood examination showed leucocytes 7,000, erythrocytes 1,500,000, hemoglobin 30, on the Talquist scale. Blood pressure was 110/80. Temperature was 99.5, respirations 30, pulse 120. The urine was acid in reaction and negative for sugar, albumen and casts. The patient's appetite was poor, but she slept fairly well. This, in brief, was her condition approximately two months before her expectancy, and it changed little up to the time of her confinement.

She was given three subcutaneous transfusions of whole blood, fifty c.c. each, taken from her husband at weekly intervals, which I believe somewhat improved her general condition and aided in tiding her over until her confinement.

On May 31, 1929, one month before her expectancy, she was delivered of a premature female infant weighing four pounds. (I may add that the baby was put on artificial feeding and her growth and development were uneventful.) Labor lasted one hour and was relatively painless and bloodless. Five hours after delivery she was given a blood transfusion of 500 c.c. of citrated blood. Her husband, whose blood typed with hers, was the donor. She had very little reaction after this transfusion, which improved her general appearance by giving color to her lips and finger tips. Nine days later, on June 8, she was given another transfusion, after which she had a slight reaction. She showed marked improvement after this transfusion and was permitted to be up for a part of each day, to take sun baths and short auto rides. She came to the office for examination on July 8, five weeks after her confinement. She had not improved any since our last examination, following the transfusion June 8.

On July 17 I was called to her home. She was complaining of extreme weakness, dyspnea and dizziness, and in general had lost ground since she was at the office, nine days before. I saw her again two days later. Her condition at that time was critical, as evidenced by air hunger, rapid respirations, delirium, vomiting, prostration, pulse 140 and thready. Her condition seemed very serious and an unfavorable prognosis was given to her family.

She was again given 500 c.c. citrated blood, her husband being the donor. She had a very severe chill following this transfusion, lasting about one hour, and followed by a temperature of 103. This transfusion was given at 11:00 P. M. and her condition, aside from the temperature, remained unchanged until 5:30 A. M. the following morning, when she was resting easier, but hard to arouse. I saw her again at 11:30 a. m., when she showed marked improvement over her condition the previous evening. Her pulse was then 120, with fair volume, respirations 30. She said she felt much better and had felt relieved before the transfusion was finished the evening before. I saw her again at 5:30 P. M., when she was improved in every way. She had taken some nourishment and was feeling quite comfortable as compared with her condition the previous evening.

It was decided in conference at this time to continue the transfusions weekly or semi-weekly as her condition might demand, according to the progress she was making. Four days later she was again transfused, after which she had a severe chill, followed by a temperature of 105, which receded to 100 after a few hours. She was transfused seven times in all and after each transfusion showed marked improvement, but showed a tendency to relapse into her former condition unless the transfusions were repeated.

Her last transfusion was August 25, 1929, which was followed by a violent chill and later by a temperature of 105.5 and severe cramps of the muscles of arms, legs and abdomen, necessitating a hypodermic of one-quarter grain morphine sulphate. The following morning this had all passed away and she was feeling fine. Her recovery from this time on was uneventful.

The liver treatment was tried in this case, both the extract and fresh liver, but on account of the emesis the patient was unable to tolerate it and after repeated trials she gave it up. She ran a low grade temperature throughout her illness, ranging from 99 to 102 and following trans-

THE LABORATORY FINDINGS IN THE CASE WERE AS FOLLOWS

BLOOD CELL COUNTS

May 31, 1929

Red Cells	1,300,000
Leukocytes	5,200
Hemoglobin	40
Color Index	1.5+

Macrocytes and microcytes abundant. Few poikilocytes. No normoblasts. No megaloblasts.

Differential Cell Count

Polymorphs	60	Transitionals	5
Large Lymphs	14	Large Monos.	3
Small Lymphs	12	Lymph Deg.	2
Eosinophiles	0	Polymorph Deg.	4
Mast Cells	0	Basket Cells	0

June 8, 1929

Red Cells	1,450,000
Leukocytes	6,200
Hemoglobin	40
Color Index	1.5+

Macrocytes and microcytes abundant. Few poikilocytes. No normoblasts. No megaloblasts.

Differential Cell Count

Polymorphs	62	Transitionals	5
Large Lymphs	18	Large Monos.	4
Small Lymphs	8	Lymph Deg.	2
Eosinophiles	0	Polymorph Deg.	3
Mast Cells	0	Basket Cells	0

July 20, 1929

Red Cells	1,500,000
Leukocytes	5,000
Hemoglobin	40
Color Index	1.3+

Macrocytes, microcytes fairly abundant. Few poikilocytes. No normoblasts. No megaloblasts.

Differential Cell Count

Polymorphs	60	Transitionals	1
Large Lymphs	18	Large Monos.	6
Small Lymphs	8	Lymph Deg.	3
Eosinophiles	1	Polymorph Deg.	3
Mast Cells	0	Basket Cells	0

July 24, 1929

Red Cells	1,600,000
Leukocytes	6,400
Hemoglobin	40
Color Index	1.2+

Macrocytes and microcytes fairly abundant. Few poikilocytes. No normoblasts or megaloblasts.

Differential Cell Count

Polymorphs	65	Transitionals	2
Large Lymphs	14	Large Monos.	4
Small Lymphs	9	Lymph Deg.	2
Eosinophiles	1	Polymorph Deg.	1
Mast Cells	0	Basket Cells	2

Laboratory Report by Dr. F. A. Hecker, Pathologist, St. Joseph's Hospital, Ottumwa, Ia.

July 29, 1929

Red Cells	1,700,000
Leukocytes	6,600
Hemoglobin	40
Color Index	1.1+

Macrocytes and microcytes fairly abundant; poikilocytes a few. No normoblasts or megaloblasts.

Differential Cell Count

Polymorphs	59	Transitionals	2
Large Lymphs	20	Large Monos.	4
Small Lymphs	14	Lymph Deg.	1
Eosinophiles	0	Polymorph Deg.	0
Mast Cells	0	Basket Cells	0

August 20, 1929

Red Cells	1,600,000
Leukocytes	6,000
Hemoglobin	40+
Color Index	1.2+

Macrocytes and microcytes fairly abundant; poikilocytes a few. No normoblasts or megaloblasts.

Differential Cell Count

Polymorphs	64	Transitionals	4
Large Lymphs	16	Large Monos.	2
Small Lymphs	9	Lymph Deg.	1
Eosinophiles	1	Polymorph Deg.	3
Mast Cells	0	Basket Cells	0

August 25, 1929

Red Cells	2,050,000
Leukocytes	6,800
Hemoglobin	50+
Color Index	1.2+

A few macrocytes, microcytes and poikilocytes. No normoblasts or megaloblasts.

Differential Cell Count

Polymorphs	68	Transitionals	3
Large Lymphs	12	Large Monos.	5
Small Lymphs	9	Lymph Deg.	2
Eosinophiles	0	Polymorph Deg.	1
Mast Cells	0	Basket Cells	0

November 15, 1929

Red Cells	4,100,000
Leukocytes	8,400
Hemoglobin	80
Color Index	0.9+

The red cells were normal in shape and size.

Differential Cell Count

Polymorphs	68	Transitionals	3
Large Lymphs	14	Large Monos.	2
Small Lymphs	10	Lymph Deg.	0
Eosinophiles	1	Polymorph Deg.	2
Mast Cells	0	Basket Cells	0

fusion as high as 105.5. She had a very persistent and annoying cough which was very difficult to control. Codein in one-quarter grain doses was used with some benefit.

We note an article in the *Journal of the American Medical Association,* dated March 22, 1930, entitled "Liver Treatment in the Pernicious Anemia of Pregnancy," by Rueben Peterson, M.D., Henry Field, Jr., M.D., and Harold S. Morgan, M.D., of Ann Arbor, Michigan, in which they report its beneficial use in three cases. We felt the need of a serum containing the active principles of liver that could be used hypodermically, but none seemed to be available.

The treatment par excellence for this rare disease is blood transfusions. Allan says that after the uterus is empty, blood transfusions lead to recovery in ninety per cent of the cases. Without transfusion forty per cent have died. Blood transfusions should be given during the pregnancy to tide the patient over until the child is viable. The liver treatment is worthy of trial.

Spontaneous delivery usually occurs about the eighth month. Induction of labor is recommended by only a few writers on this subject.

The question naturally arises: Is a woman once afflicted with the disease more susceptible to it in future pregnancies than one who has not had it? I believe the consensus of opinion is that one attack does not predispose to future attacks, although there are reported relapses associated with succeeding pregnancies.

SUMMARY

1. Blood transfusion is a specific.
2. Premature delivery is the rule and usually occurs about the eighth month of gestation.
3. Recovery rarely and probably never takes place until after the uterus is empty.
4. Repeated pregnancies are not a factor in its etiology.
5. Some form of anemia is the rule in pregnancy, but the severe form is rarely encountered.

Case Report

EMPYEMA WITH PERFORATION OF DIAPHRAGM AND STOMACH*

JAMES E. DYSON, M.D., Des Moines

D.K., male, aged two years. The patient's mother stated that the child was well until April 1, 1930, when he began to vomit and have fever.

The patient was born January 29, 1927, at full term, normal labor, weight seven pounds, six ounces. He was never breast fed; had bottle feeding, milk and Mellin's food. He was given orange juice and cod-liver oil. He had his first tooth at six months, walked at eleven months, and weighed over thirty pounds at two years. He had chickenpox and bronchopneumonia one year ago, but was sick only one week; recovery was complete.

The present illness began April 1, 1930, with vomiting and fever. The diagnosis was malaria and the treatment was quinine. Later he had abdominal distention, with pain in the right lower abdomen and kept his legs drawn up on his abdomen. Blood count was 21,000. Diagnosis was then made of appendicitis.

* Read at September staff meeting of Iowa Lutheran Hospital, Des Moines.

One week later (June 22), he was admitted to Iowa Lutheran Hospital, being sent to Dr. W. B. Hight as an appendicitis case. He was an extremely emaciated child, with no particular complaint of pain. His weight was twenty-one pounds, five ounces; temperature 101.6° axilla, pulse 100, respiration 22. He was given a general liquid diet which he took poorly, crying constantly for indigestible solid foods. He vomited frequently after feeding. His bowel movements were soft, brown and free from blood and pus. Dr. Hight did not consider him an appendix case or an acute surgical abdomen and asked us to see him.

On June 24, 1930, examination revealed a flat percussion note over the back on the left from the diaphragm up to the angle of the scapula. Breath sounds were not audible through this area. Heart was in normal position and, by percussion, relatively normal in size and shape. The heart tones were regular and normal. No friction sounds or murmurs were heard. Our opinion was that he had a walled-off empyema of the lower left pleural cavity. Pericardial effusion was ruled out by the normal heart sounds and action. *Urine* examination showed slight trace of albumin, negative sugar and occasional WBC. *Blood* examination showed WBC 18,600; Hgb. 45 per cent; RBC. 2,200,000; PMN 81 per cent; Lymph 19 per cent; Eos. 1 per cent; variation in size of RBC, no malaria parasites. *Tuberculin* test, negative (0.5 m.g. O. T. intracutaneous 48 hrs.). X-ray of chest showed,* "Obliteration of the diaphragm and the costophrenic angle on the left side with a homogeneous shadow extending to the axilla, slight infiltration of the lung structure of the lower left lobe. Changes have the appearance of a small accumulation within the pleural cavity, with involvement of the lung structure of the lower left lobe."

As he had probably had this fluid accumulation for nearly three months, and as the temperature was never above 102 rectal; since he was gaining weight, resting well, and eating a little better, we decided to temporize. A few days later the temperature jumped up to 104.5 and we decided to drain the pleural cavity.

On June 30, 1930, Dr. Hight made a stab drainage through the eighth intercostal space in the post axillary line and inserted a tube. A large amount of thick pus drained. This purulent drainage was free of any evidence of stomach contents until July 5, when blackberry juice was given the patient with his noon meal. His empyema dressing was changed at 3:00 p. m. and was found soaked and stained a bluish color, very evidently the blackberry juice. There must have been a perforation of the stomach through the diaphragm into the pleural cavity at this time. Later other evidence of gastric contents was noted on the empyema dressings. He continued to have a septic type of temperature curve, to eat poorly, and to vomit frequently. He had no abdominal distention or tenderness as of a peritoneal inflammation. The extremely hot weather in July seemed to exhaust him and he died on July 28, apparently of toxemia, starvation and exhaustion.

In this instance our patient must have had a pleuropneumonia of the base of the left lung, which caused an inflammation of the diaphragm. An exudate on the abdominal side of the diaphragm produced fibrinous and later firm fibrous adhesions of the fundus of the stomach to the diaphragm. Later a perforation of the diseased diaphragm opened directly into the stomach without contaminating the general peritoneal cavity with the empyema pus. We feel now that this adhesion of the stomach to the diaphragm was what caused the earlier diagnosis of appendicitis and the vomiting all through the illness.

Whether the low position of the drainage tube held rather rigidly in the intercostal space could have been a factor in causing the diaphragm perforation, we do not know, but it might be considered as a possibility. A few instances of subphrenic abscess perforating the diaphragm with resulting lung abscess have been reported, but no case similar to this was found in the literature.

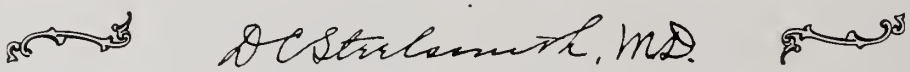
* Thomas A. Burcham, M.D., X-Ray Dept., Iowa Lutheran Hospital.

PHI BETA PI MEDICAL FRATERNITY FORMS IOWA ALUMNI CHAPTER

During the annual session of the Iowa State Medical Society members of the Phi Beta Pi medical fraternity met at an announced luncheon and perfected plans for an Iowa Alumni Chapter of the fraternity. A charter in blank had been submitted by the national officers and this charter was signed by the members present constituting the charter membership. This organization proposes an annual meeting to be held at the time of the State Society session to promote fraternity among its Iowa members. The secretary of this alumni chapter is holding the charter for the signatures of additional Phi Betas who wish to be recognized as signers of the original charter, but expects to complete the matter at an early date.

Dr. James E. Dyson, of Des Moines, has been duly elected as president of the organization for the ensuing year and Dr. R. R. Simmons, Des Moines, has been chosen as secretary. Members of the fraternity wishing to become charter members of this alumni chapter should get in touch with the secretary at once, addressing him at 1608 Equitable Building, Des Moines, Iowa.

STATE HEALTH COMMISSIONER'S PAGE



The most prevalent diseases during the month of April were scarlet fever, chickenpox, smallpox, measles and mumps in the order mentioned. Only one typhoid fever and 28 cases of diphtheria were reported. The total number of cases of fourteen common diseases was 1828, including 110 cases of syphilis and 99 cases of gonorrhea.

SCARLET FEVER

Three hundred sixty-seven cases of scarlet fever were reported. These cases were scattered among 67 counties, the largest number (74) having been reported from Woodbury County and the smallest number (1) from 14 counties. Sioux City reported 73; Des Moines, 30; Burlington, 12; Cedar Rapids, 11; Mason City, 10; Dubuque, 6; Waterloo, 4; Davenport, 4; Keokuk, 3; and Council Bluffs and Iowa City one each. The cities of Boone, Clinton, Ft. Madison, Marshalltown, Muscatine and Ottumwa reported no cases.

CHICKENPOX

Three hundred thirty-four cases of this disease were reported from 27 counties. The greatest number from any county was 91 from Woodbury while Dubuque reported 60.

SMALLPOX

Three hundred fourteen cases of smallpox were reported. Des Moines County heads the list with 83 cases. Polk County reported 55 cases. Thirty-seven counties reported cases.

MEASLES

Two hundred seventy-one cases of measles were reported from 17 counties, the largest number having been reported from Lee County (165), the next largest from Taylor County (34).

MUMPS

One hundred fifty-four cases of mumps were reported from 14 counties. Woodbury County reported 105 cases, the next highest county being Linn with 17.

DIPHTHERIA

The 26 cases of diphtheria added to the 105 cases for the first quarter make the lowest number of cases of this disease ever recorded. The total of 131 for the first four months is 27 less than that for the next lowest year 1929, and is 320 less than for the highest period (1927) of any year since 1924.

The 131 cases for the present period were reported from 12 counties with Polk County reporting the most (6) and Pottawattamie the next (5).

TYPHOID FEVER

Only one case of typhoid fever was reported. This came from Lee County. A total of eight cases of typhoid fever has been reported thus far in 1931. This is the lowest number of cases ever reported in the history of Iowa.

FIELD TRIPS

Six field trips were made by the epidemiologist, one for scarlet fever, four for smallpox and one for meningitis.

MALARIA IN IOWA

The attention of physicians throughout the state is called to the fact that malaria as a primary infection occurs in Iowa with sufficient frequency to warrant the consideration of this disease in differential diagnosis. Last summer primary infections occurred in the vicinity of Iowa City, Davenport, Muscatine, Cedar Rapids, Clarion, Spirit Lake and Melrose, according to the records of the State Hygienic Laboratories. In addition, numerous recurrent cases were encountered.

Blood specimens may be sent to the State Hygienic Laboratories at Iowa City for examination, in care of Dr. M. E. Barnes, Director. It is requested that at least four carefully made thin smears be sent. The specimens should be taken before the administration of quinin, and should be air-dried before being placed in the mailing container. The mailing container provided for forwarding gonorrheal smears may be used, providing the word "malaria" is typed on the data card.

It is perhaps needless to point out that no charge is made for the examination of blood films for malaria.

M. E. Barnes, Director, State Hygienic Laboratories, Iowa City, Iowa.

New Laws Vitally Affecting Medical Practice

Two measures were passed by the Forty-Fourth General Assembly and will become laws in July, which make very definite requirements of Iowa physicians and which carry a penalty for their violation. They are:

"M.D." Must Be Used

House File No. 225 makes it necessary for a physician in all "writing, cards, signs, circulars or advertisements" to "add after his name the letters 'M.D.'" The same is required of the other types of practitioners who are permitted to use the title "Doctor"; dentists, osteopaths, chiropractors, podiatrists and optometrists. It is important that every physician comply with this law, not only because of the penalty provided, but also because the general use of the proper titles by all practitioners will serve the useful purpose of enabling the public to discriminate. The law is quoted in full below.

Penalty For Not Reporting Venereal Diseases

House File No. 129 requires the examining physician to report immediately after the first examination any venereal disease. These reports are to be made direct to the State Department of Health, except where there is a full time municipal or county health officer, in which case the report is made to that officer. Failure to report any such case shall be cause for the refusal of renewal of license, hence careful attention to this new law is imperative. The vital parts of it are printed below.

Use of Titles (House File No. 225)

Section 1. Any person who falsely holds himself out by the use of any professional title or abbreviation, either in writing, cards, signs, circulars, or advertisements, to be a practitioner of a system of the healing arts other than the one under which he holds a license or who fails to use the following designations shall be guilty of a misdemeanor and shall be fined not less than twenty-five dollars ($25.00), nor more than one hundred dollars ($100.00), or be sentenced to thirty (30) days in jail.

A physician or surgeon may precede his name with the title "Doctor," and shall add after his name the letters, "M.D."

An osteopath or osteopathic surgeon may use the prefix, "Doctor," but shall add after his name the letters, "D.O." or "O.S." as the case may be, or the words, "osteopath" or "osteopathic surgeon."

A chiropractor may use the prefix, "Doctor," but shall add after his name the letters, "D.C." or the word, "Chiropractor."

A dentist may use the prefix "Doctor" but shall add after his name the letters "D.D.S." or the word "Dentist" or "Dental Surgeon."

A podiatrist may use the prefix "Doctor," but shall add after his name the word "Podiatrist."

Any graduate of a school accredited on the board of optometric examiners may use the prefix "Doctor" but shall add after his name the letters "Opt." or "Optometrist."

No other practitioner licensed to practice his profession under any of the provisions of title eight, VIII, code of 1927, shall be entitled to use the prefix "Dr." or "Doctor."

Venereal Disease Reports (House File 129)

2281. Immediately after the first examination or treatment of any person infected with any venereal disease, the physician giving the same shall mail to the state department of health a report stating the case number, age, sex, color, marital condition, occupation, name of the disease, except when the case occurs in a jurisdiction of a full-time municipal or county health officer, in which instance such report shall be sent direct to such officer who shall immediately forward same to the state department of health. It shall be the duty of the state department of health to report the number of the case and the name of the venereal disease reported as occurring in its jurisdiction, to each local board of health each month."

2288. When in the judgment of the local board it is necessary for the protection of the public health that any person infected with any venereal disease be quarantined, the procedure shall be the same as for other communicable diseases, except that the name of the disease present may be omitted from the quarantine card and the unafflicted members of the household shall be unrestricted. The local board may isolate such person in the detention hospital provided for in this chapter and shall cause to be administered to said person a proper course of treatment.

Failure to report any venereal disease as specified in this chapter shall be cause for the refusal of a renewal of license as provided in title VIII, chapter 115, section two thousand four hundred forty-seven (2447), of the code of 1927."

SPECIAL ARTICLE

Editor's Note.—This is the first of a series of four special articles dealing with Coronary Diseases. The next article will be entitled Coronary Thrombosis and will appear in the July issue of the Journal.

CORONARY ARTERY DISEASE.

FRED M. SMITH, M.D., IOWA CITY

It is generally known that changes are frequently noted in the coronary arteries following various acute infections and intoxications. This feature has been particularly emphasized during recent years in connection with rheumatic fever.[1] These early lesions are either an endarteritis and consist of superficial fatty plaques, or, as in rheumatic fever, are primarily a periarterial invasion.[2] They probably have no immediate effect on the coronary circulation and are of interest only in so far as they may represent the early stage in the development of arteriosclerosis.

The present discussion is concerned with the arteriosclerotic lesion, noted particularly after forty years of age, that interferes with coronary circulation and, because of this feature, is largely responsible for the high death rate from cardiac disease in later life.

A sclerosis of the coronary arteries is usually associated with a more or less general involvement of the arterial system. The clinical manifestations are thus varied and there is frequently a discrepancy between the clinical and pathologic findings. The recent advances in our knowledge of the coronary circulation have, however, contributed to a more comprehensive understanding of the subject.

ANATOMY

In the discussion of the anatomy of the coronary arteries, only those features will be considered which are regarded as essential to the above objective. The reader is thus referred to the works of Gross,[3] Spalteholz,[4] Campbell,[5] and Whitten [6] for a more detailed discussion of the anatomy of the coronary arteries.

The blood supply to the heart is provided by two arteries, the right coronary and the left coronary.

The right coronary artery arises from the anterior sinus of Valsalva. It proceeds to the right and follows the groove between the right auricle and right ventricle to the posterior aspect of the heart, usually extending beyond the interventricular septum and terminating in descending branches to the mesial posterior wall of the left ventricle. Descending branches are given off to the anterior, lateral and posterior walls of the right ventricle and to a posterior segment of the interventricular septum in addition to those mentioned to the posterior wall of the left ventricle. Important branches go to the auricles which will be mentioned later in connection with the blood supply to the conduction system. This artery is then responsible for the major portion of the blood supply to the right ventricle, a posterior section of the interventricular septum and to an area of varying extent of the posterior wall of the left ventricle adjoining the interventricular septum. It also contributes to a very significant extent to the arterial supply of the auricles, particularly the right, and to the conduction system.

The left coronary artery arises from the left anterior sinus of Valsalva. It passes downward and to the left behind the root of the pulmonary artery and soon divides into two main branches, the circumflex and the anterior descending branch.

The anterior descending branch proceeds downward along the anterior aspect of the interventricular septum around the apex and terminates in twigs which are in close proximity to the terminal ramification of the descending interventricular branch from the right coronary artery. This artery gives off lateral branches to the anterior and apical region of the left ventricular and to a small adjoining section of the right ventricle. In addition, numerous branches penetrate the interventricular septum, almost at a right angle.

The circumflex branch of the left coronary artery follows the groove between the left auricle and ventricle to the posterior aspect of the left ventricle where it terminates in descending branches. In some instances, it may continue even beyond the interventricular septum posteriorly. During the course of this artery, branches are given off to the auricles and to the anterior, lateral and posterior wall of the left ventricle. The left coronary artery, through its two main branches, is therefore responsible for the arterial supply to the greater portion of the interventricular septum, to a small area of the right ventricle adjoining the apex, and to the left ventricle, except possibly for a section of the posterior wall mentioned in connection with the right coronary artery. It will thus be seen that while the right coronary artery ordinarily crosses the interventricular septum posteriorly and takes in a section of the left ventricle, the left coronary artery, through the anterior descending branch, extends over on the anterior wall of the right ventricle.

THE CONDUCTION SYSTEM

The sinus node is supplied by the ramus ostei cavae superior which is ordinarily one of the early branches of the right coronary artery, but which may originate from the circumflex branch of the left coronary artery. The above artery anastomoses freely with posterior auricular branches from both the right and left coronary arteries. The auriculo-ventricular node and the bundle of His, have a special blood supply through the rami septi fibrosi, arising from the right coronary artery near the posterior interventricular septum. The rami septi fibrosi likewise have free anastomosis.

The right limb of bundle apparently has a fairly definite blood supply through the early septal branches of the left coronary artery. The left limb is different in that it soon divides and spreads out under the endocardium of the left side of the interventricular septum and probably receives blood from a number of the numerous septal branches.

ANASTOMOSIS

Clinical and experimental studies have demonstrated that there is often an extensive anastomosis between the right and left coronary arteries and between the branches of these arteries. This anastomosis exists chiefly between the smaller aterioles and probably in the capillary bed. In the dog, the extent to which one artery or branch may take over the territory of another, varies considerably from animal to animal, [7 & 8] and no doubt the same is true in man. At times the heart is capable of withstanding even extensive interference of the blood supply through the development of an effective collateral circulation. Instances are not infrequently encountered at necropsy in which the heart has recovered in a surprising fashion from the occlusion of one of the main branches of the coronary arteries. A case was observed by the author in which the descending branch of the left coronary artery was ligated in the repair of a stab wound of the heart, and following the recovery from the operation, there was no apparent impairment in the cardiac function. Wearn [9] reported two cases in which both the right and left coronary arteries were completely occluded. He justly concluded that the thebesian vessels contributed to the blood supply of the left ventricle, but there was no doubt an abundant collateral circulation.

PATHOLOGY

A sclerosis of the coronary arteries is invariably associated with similar changes elsewhere and is frequently a part of a general involvement of the arterial system. The arterial changes are apt to be more advanced in certain organs as in the heart, brain and kidneys. There are likewise varying degrees of aortic sclerosis. Not infrequently, however, the changes in the coronary arteries are more advanced than those seen in the aorta. In syphilis, on the other hand, the damage to the aorta is the outstanding feature, and rarely are the coronary arteries involved except by an encroachment on the ostia through an extension of the aortic process.

Minor changes in coronary arteries are rarely responsible for a significant impairment in the cardiac function unless by chance there is a coronary occlusion. The sclerosis of the coronary arteries, on the other hand, is more apt to be out of proportion to the clinical manifestations. The pathologists have frequently commented on this discrepancy. Kretz,[10] in his study of 106 cases, found no parallel between the clinical history and the anatomic findings. In six of the sixteen cases with advanced sclerosis and narrowing of the lumen of the arteries, there was no mention of clinical symptoms during life. Only four had definite evidence of cardiac failure. Morawitz and Hochrein [11] have more recently studied the autopsy findings in 91 cases of coronary sclerosis. In 75 per cent of this series, there were no subjective symptoms of cardiac disease.

In the more advanced forms of arteriosclerosis, nodular thickenings of the intima project into the lumen and produce varying degrees of occlusion. A complete occlusion frequently results through a gradual extension of the process or from a thrombus. Certain of the smaller branches are likewise eliminated. This particular feature is demonstrated in a striking fashion by injected specimens. By this method of study, these small branches have the appearance of being nipped at the point where they leave the parent vessel.

It is generally recognized that the arteriosclerosis is usually more advanced in the anterior descending branch of the left coronary artery. This no doubt accounts for the frequent occlusion of the vessels. Whitten[6] has recently called attention to a similar involvement of the terminal descending branches of the right and of the circumflex branch of the left coronary artery and states that occlusion of these vessels frequently occurs and is often overlooked. This author comments on an interesting anatomic feature of the above vessels which he believes may contribute to the development of the arteriosclerosis. He points out that the branches of these arteries immediately penetrate the cardiac musculature at almost a right angle and suggested that the immobilization, produced by the method of branching, promotes tortuosity and possibly leads to a kinking or constriction of the lumen.

The changes in the myocardium range from the small areas of fibrosis resulting from the elimination of smaller arterial twigs which may be de-

tected by the microscope, to the extensive fibrosis and necrosis induced by the occlusion of a larger artery. In the latter, the extent of the damage depends on the degree of anastomosis and whether or not the occlusion is sudden or gradual. The response of the heart to a coronary accident is thus determined in a large measure by the extent and the opportunity for the further development of the collateral circulation. If a vessel is gradually occluded and the neighboring artery, which contributes to the blood supply of this section of the cardiac musculature is not involved, conditions are most favorable to the further development of the collateral circulation. Under these circumstances, more and more of the arterial supply to the particular section of cardiac musculature is taken over by the second vessel and the complete occlusion of the first, even though abrupt, may be followed by a surprisingly satisfactory recovery or possibly not be suspected during life, and later discovered at necropsy.

The changes in the cardiac musculature predominate in the left ventricle. In general, there are three types of lesions. The first is represented by small areas of fibrosis resulting from the nipping of small arterial twigs. Some of these are detected only by histologic examination. The larger are recognized by small depressions on the surface of the ventricle. They are induced by the occlusion of vessels which penetrate the myocardium at a right angle to the surface arteries.

A localized area of degeneration and replacement by fibrous tissue of the anterior apical wall of the left ventricle and the lower anterior section of the interventricular septum is perhaps the most characteristic lesion. There is a striking variation in the extent of the lesion, depending on the degree of collateral circulation. It results from the occlusion of the anterior descending branch of the left coronary artery and in the more extensive form involves the anterior papillary muscles. The third type of lesion is that of a disseminated degeneration and fibrosis of the endocardial and subendocardial layers of the lateral and posterior walls of the left ventricle, and frequently involves a portion of the posterior section of the interventricular septum. This type of lesion is seen in the most extensive form following the occlusion of the circumflex branch of the left coronary artery, and to a less extent following the closure of the terminal descending branches of this vessel or of the corresponding branches of the right coronary arteries. It is to be remembered in this connection that the terminal branches of the right coronary artery frequently extend over on the posterior wall of the left ventricle. The lesion produced experimentally in the dog, following the ligation of the two main branches of the left coronary artery, is similar to that observed in man resulting from the occlusion of these vessels. In man, however, the right coronary artery ordinarily partakes more in the circulation of the posterior wall of the left ventricle.

In coronary artery sclerosis, the changes in the papillary muscles and the mitral valve structures are an important feature. In the series of necropsies studied by Willius and Brown,[12] the mitral valves were damaged in 44 (51 per cent) of the 86 cases. The papillary muscles particularly are apt to be involved by the occlusion of either of the main branches of the left coronary artery. The changes in the above structure contribute to the alteration in the first sound at the apex and the production of the systolic murmur frequently heard in this location.

In addition to the above changes in the myocardium, there are usually varying degrees of cardiac hypertrophy. There is, however, no definite relationship between the extent of the cardiac hypertrophy and the degree of coronary sclerosis. An advanced sclerosis of the coronary arteries is occasionally seen in a relatively normal sized heart. In the most extensive cardiac hypertrophy, on the other hand, the larger coronary arteries at least may not show significant changes. The latter characteristic is frequently observed in the hypertension form of heart disease, particularly after the onset of cardiac failure.

SYMPTOMS

It is generally appreciated that there is a marked variation in the clinical manifestations of coronary artery disease. This, however, is not surprising in view of the anatomy and pathology of the coronary arteries and the fact that a sclerosis of these vessels is usually associated with more or less general involvement of the arterial system. The onset may thus be very insidious and perhaps overshadowed or even entirely masked by symptoms directing attention to some other organ; or, on the other hand, it may be extremely abrupt, as in coronary occlusion. The appearance of premature contraction or the occurrence of paroxysms of auricular fibrillation which may later become permanently established may be the first indication of an impaired cardiac function. Usually, however, the first symptom is that of shortness of breath or the consciousness of a substernal discomfort on exertion. The frequent association of the latter with upper abdominal discomfort often convinces the patient that he has a gastric disturbance. In some, the initial manifestation is that of a nocturnal dyspnea. The onset may follow an acute upper respiratory infection complicated by a bronchitis which persists longer than usual. More frequent-

ly the onset is precipitated by over-exertion. The tendency of individuals above fifty-five years of age to over-estimate their physical ability is often responsible for irreparable cardiac damage. Various other factors, such as emotional upsets, loss of sleep and indiscretion in diet, at times appear to be related to the onset of the cardiac symptoms.

The most common clinical picture is that of the congestive type of cardiac failure with progressive edema, and finally the development of a generalized anasarca. In many of these, there is at no time significant cardiac pain. In some, a history of angina may be obtained. This feature, however, is often overshadowed by the shortness of breath and not elicited except by direct question. There is another group in which the picture is that of angina pectoris. In the beginning, there may be no appreciable shortness of breath. Later, however, during the height of the distress, it frequently becomes more prominent. In some, the picture is terminated by an attack of angina pectoris or coronary occlusion. Others pass into congestive failure, either through a gradual progression of the cardiac disability or possibly because of a coronary occlusion, and the angina may disappear.

In a series of eighty-six necropsies studied by Willius and Brown[12], twenty-one (24 per cent) had angina pectoris without other symptoms of cardiac failure. This group had extensive sclerosis of the coronary arteries, and in fourteen (66 per cent) there was pronounced occlusion of the vessels. In twenty-two of the eighty-six, the clinical picture was that of progressive myocardial failure without pain. The extent of the sclerosis of the coronary arteries in this group was not as marked as in those with angina pectoris and only five had a significant reduction in the lumen of the vessels. In the remaining thirty-four (40 per cent) the symptoms were not sufficient to make a diagnosis of coronary artery disease. The sclerosis of the coronary arteries in the latter group was still less than that observed in the former. These findings are in general accord with the observation of Nathanson[13] on the autopsy finding of 113 fatal cases of coronary artery sclerosis. In 80 per cent, attacks of angina pectoris, or less often, acute respiratory distress, were the outstanding clinical manifestations, while in the remaining 20 per cent, the symptoms were those of a progressive cardiac failure without pain. The sclerotic changes were advanced in all instances, but the incidence of occlusion was highest in those that had angina pectoris.

The physical findings are extremely variable. There is frequently a hypertension or the history of an elevated blood pressure. In those with hypertension, there is invariably a significant increase in the size of the heart. This is more apt to be a prominent feature in those with congestive failure. In many of these a hypertension has no doubt been a very important factor. Various forms of cardiac irregularities, particularly premature contractions, and auricular fibrillation, are common findings. While auricular fibrillation is rarely associated with angina pectoris, it is frequently responsible for the onset of the congestive type of failure. Auricular flutter and heart block (Adams-Stokes attacks) are occasionally observed. A muffling of the first sound at the apex, a gallop rhythm and perhaps a faint systolic apical murmur may be the outstanding auscultatory findings. The first sound is occasionally accentuated or slightly rough. At other times there is a well developed systolic murmur at the apex which may be soft, blowing, harsh, or even musical in character. If an auricular fibrillation is present, the first sound at the apex varies in intensity, and when the rate is particularly rapid, it is apt to be choppy. The associated systolic murmur likewise varies in intensity from cycle to cycle. The aortic second sound is usually accentuated and occasionally slightly amphoric. There is often a faint systolic murmur which is transmitted to the vessels of the neck. This murmur is seldom rough unless associated with an aortic stenosis. It is to be recalled that an arteriosclerosis is an important etiologic basis for aortic stenosis. An occasional faint diastolic murmur is heard. If, however, there is a significant aortic regurgitation, it is usually either syphilitic or rheumatic in origin. In uncomplicated arteriosclerosis, it is rarely possible to demonstrate much increase in the size of the aorta except as manifested by an extension upward. Under the latter circumstance, an impulse may be transmitted to the palpating finger in the supersternal notch.

During the early course of angina pectoris, there may be no significant cardiac findings. The diagnosis may thus be solely dependent on the clinical history and the demonstration of an arteriosclerosis elsewhere.

The kidneys are rarely spared in the arteriosclerotic process. The urine frequently shows a trace of albumin, and on microscopic examination, hyaline and occasional granular casts are seen. In some, the renal damage may be more extensive and occasionally a renal insufficiency is discovered. Bell and Clawson[14] place the incidence of renal insufficiency at approximately ten per cent. Cardiac and renal failure may appear about the same time. Either may occasionally precipitate the other. In men, the possibility of a bladder retention from an enlarged prostate should always be considered. The incidence of diabetes mellitus is much higher than that of renal insufficiency. The changes in the

peripheral arteries may be extensive, but often not comparable to those of the cerebral and coronary arteries.

A fundus examination is essential to a careful survey of the vascular system. The findings in the retinal vessels indicate in general the extent of the cerebral arteriosclerosis and are representative of the changes in the smaller arteries elsewhere.

ELECTROCARDIOGRAPHIC FINDINGS

The electrocardiograph has been one of the factors responsible for the wide-spread interest in arteriosclerotic heart disease during recent years, and has contributed in a very significant manner to a more comprehensive understanding of the subject. In some instances, it is true that the electrocardiographic findings are not of importance. In others, it corroborates the clinical impression obtained by other means. Finally, however, there is a group in which it broadens to a considerable extent our conception of the condition and thus may have a decided bearing on the prognosis.

The changes in the ventricular complexes, as might be expected, are the most important electrocardiographic signs in arteriosclerotic heart disease. In general, an enlarged left ventricle is associated with a left ventricular preponderance curve. This is more commonly seen in the advanced form in hypertension of considerable duration. The T deflection is frequently altered in a preponderance curve, particularly if there is some increase in the duration of the QRS group, and a negative phase in Lead I and occasionally in Lead II.[15] A negative T deflection in Leads I and II is generally regarded as indicating significant myocardial damage.[16] This finding, excluding the alteration induced by digitalis, is of greater importance when not associated with a preponderance curve. A sharp negative T deflection in the absence of a broadening of the QRS group should suggest the possibility of a coronary accident.[17] This diagnosis is almost certain if there is a progressive change in this feature.

A prolongation of the QRS group,[18] as in bundle branch block and arborization block,[19] is occasionally encountered. The latter is apt to be low in amplitude. These types of curves are usually associated with advanced coronary artery disease, particularly the latter, with extensive replacement of the myocardium and fibrous tissue. The various observers have unanimously agreed that these electrocardiographic findings warrant an unfavorable prognosis.

A minor change in the QRS group is of less importance. This is occasionally seen in the third lead of the electrocardiogram of the normal individual. If, however, it occurs in all leads, and particularly if the slurring occurs near the peak of the most prominent wave, it is regarded as indicating an interruption in the spread of the excitation wave within the ventricle, which ordinarily results from coronary artery disease.

DIAGNOSIS

Coronary artery disease, even in the advanced form, may not be recognized because of the absence of clinical manifestations. In some, the symptoms may be indefinite and difficult to connect with the heart. The clinical history is, by all odds, the most important means of determining the functional efficiency of the heart and may alone permit a diagnosis, as in angina pectoris, even in the absence of definite physical findings. The possibility of coronary artery disease should be kept in mind in every individual in the arteriosclerotic age. An upper abdominal discomfort may be cardiac in origin. An indefinite chest pain may mean angina pectoris. A persistent bronchitis or an asthmatic-like attack often represents a beginning failure of the left ventricle. The appearance of a paroxysm of auricular fibrillation, and certainly the onset of a permanent fibrillation, may be the first manifestation of an impaired cardiac function. A careful estimation of the condition of the cardiovascular renal system is an outstanding obligation of the physician to every individual of the arteriosclerotic age who seeks medical advice, regardless of the apparent nature of the illness. The history of an elevated blood pressure or the presence of a hypertension should at once arouse suspicion of significant arterial changes. In some, the cardiac findings seem unimportant or may even be overlooked unless attention is focused on the heart by the history. A muffling of the first sound at the apex and a gallop rhythm are occasionally the only findings that attract the attention of the examiner. A combination of these findings, however, always means a serious impairment of the cardiac function. In the doubtful cases, the electrocardiogram may be the deciding factor in the diagnosis.

PROGNOSIS

The prognosis of a patient with coronary artery disease is dependent not only on the cardiac condition, but on the associate damage of the arteries elsewhere, especially those of the brain and kidneys and whether or not there is a hypertension. There is always a possibility that the condition may be terminated by a cerebral accident or renal insufficiency. In patients with diabetes, the picture is still further complicated.

The efficiency of the heart is, in a large measure, determined by the size. If the size is extremely large, the reserve capacity is certain to be very

limited. In cardiac failure there is always a question as to how much may be expected from treatment. The restoration of the cardiac function, furthermore, becomes progressively more difficult with each successive failure and the extent to which the function may be restored is gradually reduced.

The future of an individual with angina pectoris is always in doubt. Even though the angina may appear mild, there is ever the possibility of sudden death. The prognosis, in general, is more hopeful in those without hypertension or anginal symptoms. Experience teaches us that there is less apt to be extensive sclerosis of the coronary vessels and the conditions are more favorable for the development of an effective collateral circulation.

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THE IOWA MEDICAL DIRECTOR'S ASSOCIATION

On May 12th the Iowa State Medical Director's Association convened in annual session. This association is composed of the medical directors of all Old line life insurance companies, having home offices in the state of Iowa. Following a business session in the afternoon, the members and guests were entertained at a banquet held at the Hotel Fort Des Moines. The banquet speaker was Dr. Fred M. Smith, of Iowa City, who presented a paper illustrated by lantern slides on the theme of Coronary Disease.

The officers of the association for the ensuing year are: president, Jennings Crawford, M.D., of the Cedar Rapids Life Insurance Company of Cedar Rapids; vice president, L. K. Meredith, M.D., of the National Life Company, Des Moines; and secretary, R. R. Simmons, M.D., of the Equitable Life of Iowa, Des Moines.

MARYLAND RESTRICTS SALE OF METHANOL WOOD ALCOHOL

The sale and distribution of methanol wood alcohol will be stringently regulated in Maryland according to the provisions of the Edmunds Bill which was adopted by the legislature and signed by Governor Albert C. Ritchie, Tuesday, April 7.

The bill prohibits the sale of methanol wood alcohol whether sold for anti-freeze or other commercial purposes unless sold in containers bearing a warning label stating that it is a violent poison and cannot be made nonpoisonous and will cause blindness or death if taken internally. Methanol must also be colored to prevent it from being confused with potable alcohol and must contain a substance which will cause vomiting if it is imbibed.

A record must be kept of all individual sales in containers of less than 50 gallon drums whether to be used as an automobile anti-freeze, paint or other commercial solvent and the record must state the date, name and address of the purchaser and intended use. The penalty for violation of the law includes a fine of not more than five hundred dollars or imprisonment for not less than three months nor more than one year, or both.

THE AMERICAN COLLEGE OF PHYSICIANS TO MEET IN SAN FRANCISCO, 1932

The American College of Physicians will hold its Sixteenth Annual Clinical Session at San Francisco with headquarters at the Palace Hotel, April 4-8, 1932. Following the Clinical Session, a large percentage of the attendants will proceed to Los Angeles where a program principally of entertainment will be furnished April 9, 10 and 11.

Announcement of the dates is made particularly with a view not only of apprising physicians generally of the meeting, but also to prevent conflicting dates with other societies that are now arranging their 1932 meetings.

Dr. S. Marx White, of Minneapolis, is President of the American College of Physicians, and will arrange the program of general sessions. Dr. William J. Kerr, Professor of Medicine at the University of California Medical School, San Francisco, is general chairman of local arrangements, and will be in charge of the program of clinics. Dr. Francis M. Pottenger, of Monrovia, is President Elect of the College, and will be in charge of the arrangements at Los Angeles. Mr. E. R. Loveland, Executive Secretary, 133-135 S. 36th Street, Philadelphia, Pa., is in charge of general and business arrangements, and may be addressed concerning any feature of the forthcoming session.

The JOURNAL of the Iowa State Medical Society

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RALPH R. SIMMONS, Editor.....Des Moines

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THE EIGHTIETH ANNUAL SESSION

The eightieth annual session of the Iowa State Medical Society, which recently convened in a three day meeting in Des Moines, was generally conceded to have been the most outstanding in the history of the Society. It was not only a record-breaking meeting from the standpoint of attendance, but was declared by those present as unexcelled in scientific interest and the fine spirit of fraternity which attended every session. Five years ago a record in attendance was set when Iowa physicians registered for the Diamond Jubilee numbered 770. At that time it was thought that such a registration would not be equalled or excelled for many years. However, three years later a new record was set by an attendance of 772. This year a new high mark in interest was demonstrated by a registration of 790. This fact alone demonstrates a healthy spirit of unity which has been developed during the past few years and could not prevail if dissentions existed within our membership.

Interest in the annual session of the Society was also strikingly demonstrated in the uniformly good attendance at every scientific session. In the past it has frequently been observed that following each presentation there was much restlessness and shifting of the audience. Members would take occasion to enjoy a friendly chat in the corridors while papers of lesser appeal were presented. This year the corridors were noticeably deserted during the time of the scientific programs and frequently between addresses the audience would not vary a score. Back of such interest was manifestly the exceptionally high type program which had been so thoughtfully prepared by the section chairmen. Every section of the state was duly represented and every phase of practice touched upon. By the aid of well placed and skillfully controlled loud speakers, the audience was uniformly enabled to hear and enjoy every presentation.

The banquet and smoker bore testimony of the feeling of fraternity which permeated the entire group. Great credit was due the local arrangements committee for the splendid entertainment prepared for both the members and the visiting ladies. At all functions there was record attendance and accommodations were taxed to the limit.

The official business of the session was transacted with dispatch revealing the thought and preparation on the part of the delegates befitting of the work in hand. Most far-reaching perhaps in these accomplishments was the resolution enabling the redistricting of the state for more uniform representation and in effecting an increase in dues sadly needed to carry on the enlarged activities of the organization. The program for redistricting the state as approved was chosen from a number suggested as being most equitable in representation and most workable from the standpoint of unity. It provides for eleven councilor districts formed as nearly as possible in rectangles in order to facilitate councilor activities. The dues for the ensuing year were advanced from $7.50 to $12.00.

Upon recommendation by the nominating committee, the following officers* were duly elected. In recognition of his many services to organized medicine, notably his untiring efforts as chairman of the Committee on Medical Education and Hospitals, Bert L. Eiker of Leon, was named president elect. Dr. Prince Sawyer of Sioux City, was chosen first vice president and Dr. Fred Clark of Fairfield, second vice president.

Overruling his reluctance to succeed himself as trustee, the House of Delegates indicated the election of Oliver J. Fay of Des Moines, to this office for a term of three years.

The approval of the plan for redistricting of the state automatically retired all existing councilors and the following new councilors were duly elected:

Dr. Felix A. Hennessy of Calmar, Dr. L. R. Woodward of Mason City, Dr. Frank P. Winkler of Sibley, Dr. William Jepson of Sioux City, Dr. W. W. Pearson of Des Moines, Dr. W. L. Hearst of Cedar Falls, Dr. A. W. Erskine of Cedar Rapids, Dr. C. A. Boice of Washington, Dr. W. A. Sternberg of Mount Pleasant, Dr. H. A. Spilman of Ottumwa, Dr. J. G. Macrae of

* Editor's Note: A complete list of the Society's officers will be found on page 328.

Creston and Dr. A. V. Hennessy of Council Bluffs.

Sioux City was chosen as the meeting place for the eighty-first annual session.

ANNOUNCING A SERIES OF SPECIAL ARTICLES ON CORONARY DISEASES

In this month's issue of the Journal will be found the first of a series of four special articles prepared by Dr. Fred Smith, Professor of Medicine in the College of Medicine at Iowa City, dealing with the problems of coronary diseases. In presenting this series we have deviated somewhat from our traditional custom insofar as these original contributions will be classed as "Special Articles." It is believed, however, that since this series of papers has been prepared upon the special request of your editor and deal with a problem of such outstanding importance to every physician that such a designation is permissible and may serve to attract especial attention to them. Dr. Smith proposes to discuss in the series the anatomy and physiology of the heart pertinent to coronary diseases, methods of diagnosis, coronary thrombosis and occlusion, angina pectoris and the newer methods of treatment. The editor of the Journal, appreciating the labor involved in the preparation of this series of articles, wishes at this time to express his gratitude to the author for the hearty response accorded the request for this discussion.

THE NEW OPEN FORUM

At the annual session of the Iowa State Medical Society a motion was carried instructing the editor of the Journal to establish an Open Forum in the Journal devoting not to exceed two pages per issue to this section. It is believed that such a section may be profitably used for the discussion of problems of general interest and much benefit to the profession result from a free exchange of ideas. It is hoped that such a Forum will not be used for the purpose of airing personal grievances nor the attempt made to prostitute its purpose into that of "Battle Royal." While the editorial committee will not be responsible for the opinions expressed, every effort will be exercised to prevent the publication of misstatement. It should be borne in mind that opinions expressed by contributors to this Forum are personal ones and in no way reflect editorial or official expression. All contributions to this section must be signed and should be addressed to the Editor of the Journal, 1122 Bankers Trust Building, Des Moines, Iowa.

FORERUNNERS OF SICKNESS INSURANCE*

The appearance of the foundations of a structure is usually a good sign of prospective building. If the same foundations are already laid in the United States, that, in other countries, have always preceded the building of a sickness insurance system, then it is well for physicians to consider what form that structure may take and whether it will be such as will make for the best interests of the profession.

Fraternal and group insurance covering sickness is widespread and growing rapidly. The latter expanded in coverage from $13,000,000 in 1912 to $5,600,000,000 in 1928.[1] Even these colossal figures have grown at a most amazing rate since that date.

Workmen's compensation legislation has been an almost invariable forerunner of general sickness insurance. In 1910 no state had such legislation. Today all but four have more or less elaborate systems of protection in this field. There is no agitation for their repeal, and little opposition to their continual extension.

That extension has already made "occupational disease" compensable in several states and more are added annually.[2] The tendency is clearly described in a recent report of the Industrial Commission of South Dakota: "The original idea of the workmen's compensation law was that of helping the injured worker to bridge over his troubles until he was again able to resume his ordinary labor. But by actions of legislatures, courts and commissions it is beginning to approach that of a general plan of health and accident insurance."[3]

About 17,000,000 workers are paid more than $150,000,000 annually under these laws at present, an amount fully comparable to that expended by many European countries on complete systems of compulsory health insurance. This legislation gains greatly in significance when it is considered as the foundation and framework of future and vastly more extensive systems of insurance, for it now contains nearly all the features of the more extensive European systems to which physicians most strenuously object. There is little "free choice of practitioner," professional confidence is not respected, there is a mass of lay interference, the tendency to reduce fees to a minimum is already apparent, and charges of undue influence on professional testimony by employers or insurance companies on one side and by malingering employes upon the other are already common.

*Editor's Note: This study is being financed by the American College of Dentists.

1. J. B. Andrews, "Social Insurance in the U. S.," Current History, February, 1931, pp. 716-719.
2. Ethelbert Stewart, "Occupational Diseases and Workmen's Compensation," Monthly Labor Review, February, 1930, p. 93.
3. Bulletin, Association of Casualty and Surety Executives, Oct. 1930, pp. 9-10.

All observers agree that a majority, at least, of these evils is due to an almost complete lack of professional participation in the formation and administration of such legislation. Although the whole operation of the law depends upon the character of the professional service, very few physicians occupy significant administrative positions.

Every period of industrial depression has been followed by a rapid expansion of social insurance. More than a dozen states are already considering plans for unemployment insurance, which will almost inevitably involve sickness insurance. The federal government has expended more than $600,000,000 since 1918 for medical care for veterans of the late war. The system of mothers' pensions is spreading over the nation nearly as rapidly and extensively as did workmen's compensation. All of which means that the question of the attitude of physicians to sickness insurance, and the tremendous changes it will bring in all professional relations is becoming a very present one.

Again turning to the experience of the professions in other countries we can learn that professional indifference or mere opposition to such extension has never had any noticeable effect in delaying or modifying such legislation. The forces behind the movement are too great to be merely blocked.

On the other hand intelligence, if properly applied, can control the most powerful natural or social forces. Whenever physicians were organized, informed and prepared to direct such legislation, the people had great faith in professional advice on how best to protect the health of the community and the efficiency of the profession.

When such legislation is proposed in any state, as it probably will be in the comparatively near future, legislators will listen to professional opinions, if backed by special knowledge. This is especially true since it can be proved to the hilt that the interests of public health are more closely related to professional interests than to the interests of any other element of the population that may be concerned in furthering such legislation.

THE D. W. SMOUSE OPPORTUNITY SCHOOL OPENS

On Sunday, May 31st, appropriate ceremonies were held marking the official and formal opening of the David W. Smouse Opportunity School located in Des Moines. This school is unique in the state, since it is made possible by private donation and will be devoted only to the training of physically handicapped children. Dr. Smouse, who contributed a fund of $250,000 to erect and equip this building, is well known in Iowa since prior to his removal to California in 1916 he had practiced continuously in Iowa since 1879. He became affiliated with the Iowa State Medical Society in 1881, and served this organization as trustee during the years of 1907 and 1908.

The Smouse school offers to the city of Des Moines an opportunity to supply the teaching needs to thousands of handicapped children, now partially or wholly denied this opportunity because of inadequate facilities. The school is strictly modern in every equipment, and a staff of especially trained teachers will observe the physical and mental needs of the children from both the standpoint of prevention and correction. It is the devout aim of the school to discover the vocational possibilities and aptitude of the child so that he may find his niche in life and in order that he may live a life of usefulness and happiness. Physicians and educators visiting Des Moines will receive great inspiration from a visit to this new Opportunity School.

THE COFFEY-HUMBER CANCER CURE CONTROVERSY

During the past few weeks much attention has been directed by the lay press to a controversy which has arisen between the Coffey-Humber cancer research forces of California and the established cancer research organizations of New York state. The precipitating event in the controversy was the offer by Mrs. Grace Isabell Hammond Conners, widow of the late William James Conners, to donate to Dr. Coffey and Dr. Humbert her palatial home and grounds, valued at one million dollars, for the purpose of continuing their experimental work in the east. Dr. Coffey, having declared his willingness to accept this offer, presented his petition to the New York Department of Social Welfare for permission to open a cancer research laboratory and clinic at the Conners' home at Huntington, Long Island.

Dr. John Augustus Hartwell, President of the New York Academy of Medicine, speaking for organized medicine in the state protested the establishment of the laboratory and clinic since he felt that there was little scientific evidence at hand that the "cure" advanced by Dr. Coffey and Dr. Humber was effective, and that persons suffering from cancer would be attracted by his experiment and neglect the better established courses of treatment. The president of every county medical society in the state supported the stand taken by Dr. Hartwell. Further expression of disfavor of the project was registered by Dr. Clarence C. Little, Managing Director of the American Society for the Control of Cancer; Dr. Francis Carter

Wood, Director of the Crocker Institute of Cancer Research, and Dr. Burton T. Simpson of the New York State Institute for the Study of Malignant Diseases. Dr. Shirley W. Wynne, New York City's health commissioner, openly opposed the project, while Dr. James Ewing, America's outstanding authority on cancer, expressed grave doubt that the study of cancer would be furthered by such a program.

It is not apparent why Drs. Coffey and Humber, who state that they are overrun with clinical material in their California clinic, should seek an outlet in the east if their expressed desire solely to advance science is a sincere one. The established agencies of New York state are willing to co-operate fully with the California investigators providing a supply of their treatment can be made available. The extract, however, is covered by patents taken out last year by Drs. Coffey and Humber and can only be prepared or supplied by them. Overtures have been made by the New York agencies to investigate thoroughly the claims of the proponents of the treatment if the drug can be supplied them. It would seem that such a course would more quickly and convincingly advance science than the establishment of a new agency.

There is, however, another angle of this controversy which should be well considered. It is patently unfair that any agency or group of agencies should feel that they have a monoply on the protection of human health. In the attempt to conquer this horrible and little understood malady, responsible for more than one hundred thousand deaths annually in this country, no avenue of possible relief should be closed. They should be safeguarded so that the uninitiated would not be misguided and preyed upon, but never closed until definitely proved worthless. In the present controversy there appear to be some elements of throttling the Californians without thorough investigation.

We will watch with interest the progress of this debate, since much of value may develop from so far-reaching a discussion and investigation.

CHIROPRACTOR GIVEN WORKHOUSE SENTENCE

As a test case, William H. Werner, President of the American Bureau of Chiropractic, was recently placed upon trial in New York state for the practice of chiropractic without license. While forty states of the Union recognize chiropractic and have some legalization act upon their statute books, New York state has never given them legal recognition and for this reason has considered the practice of chiropractic as outlaw.

The case of the State of New York against Chiropractor Werner is significant since Werner, said to have an income of $70,000 a year, introduced some 200 patients before the court in support of his contention that chiropractic was a healing art and upon this ground demanded legal recognition. It would appear from a report of this trial that Werner disregarded the issues involved and attempted rather to convice the judge of the excellence of his art and on this basis establish a precedent which would permit other chiropractors to practice with impunity within the state. The trial judge, however, insisted upon a presentation of the case within the terms of the court of the state and on this basis found Chiropractor Werner guilty and sentenced him to six months in the workhouse.

THE MODIFICATION OF POWDERED MILKS

When physicians are confronted with undependable fresh milk supplies when feeding infants, especially in the summer time, it is well to consider the use of reliable powdered whole milk such as Mead's. Such milk is safe bacteriologically, of standard composition, is easily reliquefied, and is particularly desirable for the mother who takes her baby with her on her vacation. Under these conditions, Dextri-Maltose is the physician's carbohydrate of choice just as it is when fresh cow's milk is employed. The best method to follow is first to restore the powdered milk in the proportion of one ounce of milk to seven ounces of water, and then to proceed building up the formula as usual. Mead Johnson & Company, Evansville, Indiana, will be glad to send Literature No. 61 which gives practical working formulae for modifying powdered and dried milks, evaporated milk, lactic acid milk, protein milk and cow's milk.

VACATIONS IN CANADA

Canada has become in recent years one of the most popular playgrounds of the North American continent. They have developed some 75,000 miles of paved or hard-surfaced highways and offer unusual attractions for fishing and hunting. Lakes and rivers, well stocked with fish, hunting areas of vast extent, and camping grounds in their natural state, contribute to the vacationist's pleasure. Prospective tourists to the region will be glad to learn that information including a number of especially prepared booklets on Canada's recreational attractions, also automobile road maps indicating the main connecting highways between Canada and the United States, may be obtained free of charge from the National Development Bureau, Department of the Interior, Ottawa, Canada. The bureau has also considerable information on file concerning motoring, canoeing, fishing and other phases of recreation in Canada, which they are glad to send to applicants, upon learning of their specific requirements.

THE AMERICAN BOARD OF OBSTETRICS AND GYNECOLOGY

The American Board of Obstetrics and Gynecology, composed of nine members and examiners, elected by The American Association of Obstetricians, Gynecologists, and Abdominal Surgeons, The American Gynecological Society, and the Section on Obstetrics, Gynecology, and Abdominal Surgery of The American Medical Association, was formally organized in Niagara Falls, September 16, 1930. The function of the Board is to grant certificates indicating proficiency and specialization in Obstetrics or Gynecology, or both, to those who comply with its requirements.

The nine members of the Board are:

Dr. Walter T. Dannreuther, New York City; Dr. Fred L. Adair, Chicago; Dr. E. A. Schumann, Philadelphia; Dr. Paul Titus, Pittsburgh; Dr. Joseph L. Baer, Chicago; Dr. Jennings C. Litzenberg, Minneapolis; Dr. Robert D. Mussey, Rochester, Minn.; Dr. E. D. Plass, Iowa City, Iowa; Dr. G. D. Royston, St. Louis.

This Board has been in the process of organization since 1927. It puts into action a determined effort on the part of these three national organizations to improve the standards of practice of obstetrics and gynecology. It expects to accomplish this by various activities, such as the investigation and encouragement of graduate extension study facilities and active clinical assistantships for men desiring to specialize in these branches, and it will endeavor by regular examinations to determine the competence of specialists in obstetrics and gynecology who apply for the certificate. Certain outstanding specialists will be granted certificates on the basis of their attainments alone, but only by a vote of the entire Board after recommendation by the Committee on Requirements. A second group is asked to undergo a practical clinical examination, whereas a third and younger group has both written and clinical examination and must submit records of a group of cases in order to qualify.

The national obstetrical and gynecological organizations, which have participated in the formation of the Board and are sponsoring its activities, as well as other societies, attach considerable importance to its certificate. It is expected that both the medical and the lay public, including hospital directors, will soon come to utilize the certificate from this Board as a means of discriminating between those who are well grounded as specialists in obstetrics and gynecology and those who are not.

The Board does not intend in any way to interfere with or limit the professional activities of any duly licensed physician, but it does aim toward standardized qualifications for specialists in obstetrics and gynecology.

Any well qualified obstetrician and gynecologist should have no difficulty in obtaining a certificate and the Board is desirous of receiving applications from those to whom this applies.

The first examination for candidates will be held simultaneously in nineteen different cities of this country and Canada on Saturday, March 14, 1931.

Detailed information and application blanks may be secured from Dr. Paul Titus, Secretary, 1015 Highland Building, Pittsburgh, Penn.

THE PREVALENCE OF SYPHILIS

A recent report from the Iowa State Department of Health indicates that

"Since 1920 there have been reported in the United States 35,000 more cases of syhpilis than of scarlet fever; 79,000 more than all forms of tuberculosis; 500,000 more than of diphtheria; there were three times as many cases of syphilis as of smallpox and five times as many as of typhoid fever reported during that time.

"In Iowa the reporting of cases of venereal diseases (gonorrhea and syphilis) is confessedly poor. A careful survey of the number of cases actually under treatment on a given day which was made recently, showed that there were ten times as many cases as reports indicated.

"However, taking the number of cases of syphilis actually reported in Iowa during the period 1924 to 1930, inclusive, the figures are somewhat different in relativity from those for the United States. Over this period of seven years, the 8,431 cases of syphilis reported in Iowa give a figure nearly eight times greater than that of typhoid fever incidence (1,095). The reported cases of syphilis were 5,495 more than of tuberculosis (2,926); 3,261 greater than of diphtheria; 3,622 greater than of whooping cough. Taking the sum of reported cases of both gonorrhea and syphilis, we find the following: the figure 20,686 is almost 19 times greater than the incidence of typhoid fever; the reported cases of both diseases were 17,760 more than of tuberculosis; 15,516 more than of diphtheria; 15,897 more than of whooping cough; 2,742 more than of scarlet fever; 12,255 more than of smallpox. Taking the incidence of gonorrhea and syphilis to be 10 times the number of cases reported as shown by the survey mentioned above, the number of cases of these two diseases is greater by 164,000 than the total of all those diseases with which comparison has just been made."

SUMMER TRAINING FOR TEACHERS IN SIGHT SAVING METHODS

Investigation by the National Society for the Prevention of Blindness indicates that there are between 50,000 and 60,000 school children in the United States who have such seriously defective vision as to require special educational methods and special eye care. The recent White House Conference on Child Health and Protection recommended the establishment of sight-saving classes as the best method of educating these pupils.

In these sight-saving classes, through the use of special large type books, movable desks, ideal lighting, and special teaching methods, children with little vision are not only given the same sort of education that the children with full vision receive, but they are also taught how to conserve their remaining sight. It has been observed that many children who

have been accounted stupid or sullen displayed excellent intelligence and pleasing disposition as soon as their defective vision was recognized and they were placed in sight-saving classes.

At the present time there are fewer than 400 sight-saving classes in the United States. It is estimated that at least 5,000 such classes will be needed to provide facilities for the education of all visionally handicapped children. To meet such a need, Mrs. Winifred Hathaway, Associate Director of the National Society for the Prevention of Blindness has arranged the following courses for the training of teachers and supervisors of sight-saving classes for the summer months:

Tulane University, New Orleans, La., June 15 to July 24; University of Chicago, June 22 to July 24; State Teachers College, Buffalo, N. Y., June 29 to August 7; Teachers College, Columbia University, N. Y., July 6 to August 14.

Further information may be secured from the National Society for the Prevention of Blindness at 450 7th Avenue, New York City.

HOSPITAL SURVEY—A.M.A. REPORT

The annual survey of the hospitals of the United States and its territories conducted under the direction and at the expense of the American Medical Association was reported in the Journal of the Association under date of March 28, 1931. This report is now available in reprint form and may be secured from the association at fifty cents per copy.

The object of this report is to supply the public, the medical profession and all individuals and organizations interested in hospital service with reliable data. The information is supplied by the hospitals themselves and is verified by direct correspondence and visitation by the corps of hospital examiners maintained by the association.

The current report contains the names of 6,719 hospitals, sanitaria, and related institutions. It omits the names of 540 which after investigation did not meet the standard of approval. Accurate information may be secured relative to those institutions accredited for the training of student nurses and also those acceptable for completing the requirements of interneship.

Any physician requiring accurate information relative to hospitals should secure a copy of this report. It should be borne in mind that the Council on Medical Education and Hospitals will be glad at any time to answer inquiries relative to hospital service, interneship, etc. upon application.

ANNUAL SESSION OF THE AMERICAN PUBLIC HEALTH ASSOCIATION

The American Public Health Association announces its Sixtieth Annual Meeting, September 14-17, in Montreal, Quebec, with the Windsor Hotel as headquarters.

The Association has not held a meeting in Canada since 1908 and public health workers from the Dominion and from the United States are invited to take advantage of this opportunity for closer contact. Each Section of the Association will arrange individual programs, covering public health administration, laboratory research, vital statistics, public health engineering, food, drugs and nutrition, child hygiene, public health nursing, health education, epidemiology and industrial hygiene. Meetings of four other organizations—American Association of School Physicians, Conference of State Sanitary Engineers, International Society of Medical Officers of Health and the International Association of Dairy and Milk Inspectors—will take place during or immediately preceding the sessions of the American Public Health Association in Montreal. For further information address the American Public Health Association, 450 Seventh Avenue, New York, N. Y.

THE NATIONAL INSTITUTE OF HEALTH

The recent congressional appropriation of $750,000 to the United States Public Health Service for the creation of a National Institute of Health should go far towards establishing world leadership in research in this country. The newly created institute will be housed in the existing hygiene laboratory quarters and will take over its equipment. Later a modern hospital and research center will be built in the environs of Washington to provide adequate facilities for the Institute. The purposes of the National Institute of Health are stated as: (1) To promote health, improve earning capacity, reduce living expenses, increase happiness and prolong life of American citizens; (2) To prevent disease by learning its cause and applying preventive measures in advance of its appearance; (3) To act as a clearing house where leading scientists of the world are to be offered opportunity to cooperate with the institute on vital health problems. Close cooperation will be maintained also with private research agencies and similar organizations.

CONSULTANTS OF THE COMMITTEE ON THE COSTS OF MEDICAL CARE

Announcement was made today of the appointment of two new consultants of the Committee on the Costs of Medical Care—Dr. John M. T. Finney, of Baltimore, professor of clinical surgery in the medical school of Johns Hopkins University, and Dr. David Riesman, of Philadelphia, professor of clinical medicine in the medical school of the University of Pennsylvania, and physician to the Philadelphia General and University Hospitals.

Dr. Finney began the practice of medicine in Baltimore upon his graduation from Harvard in 1889. He was chief consultant in surgery for the A. E. F., and was awarded the Distinguished Service Medal. Dr. Riesman has practiced in Philadelphia since his graduation from the University of Pennsylvania in 1892, and has been professor of clinical medicine there since 1912. Dr. Lee, who was graduated from Harvard in 1905, was the Henry K. Oliver professor of hygiene there from 1914 to 1924, except for the two years he spent in France as consultant in medicine for the Third Corps, A. E. F.

SPEAKERS BUREAU ACTIVITIES

LOOKING FORWARD

At the recent meeting of the House of Delegates, it was decided that the Speakers Bureau should be continued. The Speakers Bureau Committee hope that this decision was reached, not only because of the accomplishments of the Bureau, but also because of the many important activities in this field which are still left to be done.

It is the hope of all those connected with the Bureau that this year will bring about a 100 per cent increase in the scope of its activities and in the efficiency with which its duties are dispatched.

The tentative plans for the Bureau for next year were drawn up and presented at the first meeting of the new Council. That body approved the plans and appointed two members of the Council to serve with the present members of the Speakers Bureau Committee to help in formulating and carrying out such plans. These new members of the Speakers Bureau Committee are Doctors Felix A. Hennessy, of Calmar, and H. A. Spilman, of Ottumwa. Doctor Spilman comes from a county in which the county medical society is doing considerable lay education work, and for that reason he will be able to make valuable contributions to the work of the Speakers Bureau.

The creation of new councilor districts will make it possible for the Bureau to carry through a project which the old districting made practically impossible. The Committee set as a goal to "reach every county of the state." With the new uniform, compact districts the Bureau will be able to promote a meeting in each councilor district. This plan will be one of the first to be put into execution this year.

It is intended to again offer post graduate extension work to Iowa physicians. The enthusiasm with which the courses of last year were approved has led us to feel that this year, we may schedule two circuits —one in the fall and one in the spring. Although the university will feel the effects of the cut in the appropriation for the state school, the College of Medicine is cooperating in every way possible to make these courses just as successful as those last year.

The Bureau also plans to keep adding to and renewing it lists of speakers so that we may offer more and varied programs and clinics to county medical societies giving them up-to-date material.

The lay education program, which was the last to be attempted this year, is to be given special attention as the work in this field will be the ground work for the activities of other state society committees, especially the Committee on Public Policy and Legislation.

The Speakers Bureau Commitee urges and invites suggestions from all members of the state society and from lay organizations as to ways in which we can best be of service to them. Only in this way can we expect the growth of the Bureau to be of most value to the Iowa State Medical Society.

MAY PLACEMENTS

The number of placements made by the Speakers Bureau for May fall a little short in comparison with the new record set during the month of April. Many county medical societies make a practice of omitting their regular May meeting because of the meeting of the state society at that time. Consequently, there were fewer requests from county societies. Outside of the clinics, the Bureau sent speakers to two county medical society meetings. Mr. Vernon D. Blank, managing director, addressed the Washington County Medical Society on the subject of "Medical Economics." On May 28, Doctor H. W. Rathe, of Waverly, talked on "Differential Diagnosis of Heart Disease," before a meeting of the Hardin County Medical Society.

There were four other county societies for whom the Bureau arranged programs. These were presented in conjunction with the chest clinics which were held at the request of physicians in Mahaska county, Page county, Taylor county, and Benton county. The clinics were conducted by Doctors John H. Peck and D. J. Glomset, who were assisted by Doctors A. M. Smythe and W. L. Bierring, of Des Moines, and Doctor John Parsons, of Creston. These programs rounded out the clinics by affording an opportunity to discuss the diseases of the heart and lungs.

Five lay organizations requested aid from the Speakers Bureau. The Friday Club of Emmetsburg, sponsored a health day in their community on May 1, and Doctor A. A. Schultz of Fort Dodge, was their speaker. Doctor Florence Johnston, of Cedar Rapids, addressed a meeting of the Durant high school girls and their mothers. The theme of her talk was the importance of health in preparation for life. The members of the Health Club of the Tama schools and their friends heard "The Story of the Blood," by Doctor A. D. Woods, of State Center. The Women's Federated Clubs had two meetings to which the Bureau sent speakers. The Federated Clubs of Carroll county met in Coon Rapids on May 6, at which time Doctor Channing G. Smith, of Granger, spoke to them on "Public Health." The annual meeting of the combined Federated Women's Clubs in Iowa was held this month at Marshalltown. Doctor Andrew H. Woods, director of the Psychopathic Hospital, at Iowa City, addressed them on the subject of "Successful Living: The Dependence of Physical Health upon Mental Health."

Two other scientific groups were served by the Bureau. Doctor W. A. Rohlf, of Waverly, spoke to an audience of about 700 on the occasion of the nurses' graduating exercises at Rock Rapids. At the time of the meeting of the Iowa State Dental Society, Dr. Julius Weingart, of Des Moines, spoke to them in connection with the showing of the Canti Cancer Film.

SOCIETY PROCEEDINGS

Boone-Story Society

Dr. F. H. Conner, of Nevada, was elected president of the Boone-Story Medical Society at a meeting held in Boone, Thursday, April 23. Dr. Bush Houston, also of Nevada, was named vice president, and Dr. B. G. Dyer, of Ames, was re-elected secretary and treasurer.

Cerro Gordo County

The Cerro Gordo County Medical Society held its regular meeting Tuesday, May 19, in the Y. M. C. A. banquet hall. Following the six-thirty dinner, a brief business meeting was held, during which Dr. E. L. Wurtzer, delegate to the Iowa State Medical Society reported on the recent transactions of the House of Delegates. The scientific program was furnished by C. E. Dakin, M.D., of Mason City and A. B. Phillips, M.D., of Clear Lake, who discussed Infections of the Hand, and presented a motion picture film on the subject by Knavel.

T. E. Davidson, M.D., Sec'y.

Clinton County

Marshal Davison, M.D., of the University of Illinois, College of Medicine, was the speaker of the evening, Thursday, May 28, when members of the Clinton County Medical Society convened for their regular meeting. Dr. Davison spoke on the Management of Acute Intestinal Obstruction. An interesting feature of the meeting, was the showing of two talking motion picture films: Anatomy of Female Pelvis and Perineum, and Vaginal Hysterectomy for Uterine Prolapse.

Des Moines County

Irving S. Cutter, M.D., Dean of the Northwestern University School of Medicine, appeared before the Des Moines County Medical Society, Tuesday, May 19, in an address on Dr. E. W. James, who he says, "is known as one of the most remarkable men this country ever produced." Dr. Cutter, in a second lecture, told of the present day problems in educating young men for medical work and the plans which are being carried out at Northwestern University.

Greene County

Friday, April 24, after the chest clinic which was held in Jefferson, the Greene County Medical Society met at the Hotel Lincoln for a dinner and scientific session. Following the banquet, John H. Peck, M.D., presented an illustrated talk on Tuberculosis of Children, and Daniel J. Glomset, M.D., gave a talk on Treatment of Cardiac Diseases in Children.

Jackson County

The Jackson County Medical Society held its regular spring meeting at Maquoketa, Thursday, April 30. The scientific program was presented by J. C. Dennison, M.D., of Bellevue, and consisted of a paper on Anthrax, with report of a case. President Lampe appointed the following standing committees for the year: program and scientific work, public health, sick members visiting, nonresident native Jackson county physicians. After adjournment, the members went to the home of Dr. and Mrs. G. C. Ryan for a joint social affair with the auxiliary.

Johnson County

The members of the Johnson County Medical Society were guests of the University Hospital and junior members of the society, Wednesday, May 6, at the University Hospital, for the May meeting. After the dinner, Preston T. Brown, M.D., opened the program, with a paper on Radium in Treatment of Carcinoma of the Cervix, which was discussed by J. A. Brown, M.D., an interne at the University. The second paper was presented by another interne, Edwin L. Rypins, M.D., X-ray Therapy and Its Use in Carcinoma of the Cervix, and was discussed by H. D. Kerr, M.D.

Keokuk County

Dr. Smith A. Spilman, of Ottumwa, was the honored guest of the evening, Wednesday, April 22, when the Keokuk County Medical Society met in Hedrick. Dr. Spilman who has been a practicing physician in Ottumwa for the past fifty-two years, delivered the address, Doctors—Regular and Irregular. The program was concluded with an address on The Anatomy of the Hand with Regard to the Draining of Deep Infections, by J. W. Dulin, M.D., of Iowa City. About eighty physicians from Pella, Oskaloosa, Ottumwa, Burlington, Albia, Bloomfield, Iowa City, and Fairfield were in attendance.

Linn County

Thursday, April 30, more than one hundred twenty-five members of the Linn County Medical Society held a dinner meeting at the Roosevelt Hotel. Guests present included Dr. W. A. Rohlf, of Waverly; Dr. Channing G. Smith, of Granger, Dr. T. U. McManus, of Waterloo, and Mr. Vernon Blank, of Des Moines, who gave a detailed report on legislation enacted by the recent state legislature.

Marshall County

The summer clinic of the Marshall County Medical Society was held Wednesday, May 27, at the Elmwood Country Club with the following speakers: J. W. Dulin, M. D., of Iowa City, The Anatomy of the Hand in Relation to the Draining of Deep Infection; Sumner L. Koch, M.D., associate professor of surgery at Northwestern, Restoration of Function After In-

juries and Infections of the Hand; and Walter H. Nadler, M.D., associate professor of medicine at Northwestern, Medical Treatment of the Diseases of the Liver. The session closed with a six-thirty banquet served to the attending physicians and wives.

Polk County

The regular meeting of the Des Moines Academy of Medicine and Polk County Medical Society was held at the Hotel Fort Des Moines, Tuesday, May 26. The first part of the scientific program consisted of A Special Case of Undulant Fever, the history of which was read by Corwin S. Cornell, M.D., of Knoxville, while William E. Sanders, M.D., the consulting physician, continued with findings, discussion of treatment and results. The essayist for the evening was William E. Sanders, M.D., who presented a paper on Primary Carcinoma of the Ureter. Both the clinical presentation and the paper were informally discussed by the society. It was moved that a committee of the society be appointed by the president to prepare resolutions expressing the gratitude and appreciation of the society for the contribution of Dr. and Mrs. David W. Smouse to the David W. Smouse Opportunity School for Handicapped Children; and further, that the committee represent the society at the dedication ceremony May 31, 1931. President Holbrook appointed Doctors Walter L. Bierring, Walter E. Baker, Oliver J. Fay, Fred Moore and Addison C. Page to act in accordance with the motion. It was announced that regular meetings of the society would be discontinued during the months of June, July and August. However, the Section on Experimental Medicine, formerly known as the Academy of Medicine, will hold a meeting on June 30, at which time Arthur H. Hertzler, M.D., of Kansas City, will speak.

Pottawattamie County

About fifty members of the Pottawattamie County Medical Society attended the clinic meeting which was held Thursday, April 30, at the Mercy Hospital. The morning was devoted to clinical presentations by the staff as follows: G. V. Caughlan, M.D., Carbuncle of Kidney; A. V. Hennessy, M.D., Pyloric Stenosis; S. D. Maiden, M.D., Malignancy of Esophagus and Pharynx and Malignancy of Tonsil; J. L. Stech, M.D., Nephrosis, and W. E. Ash, M.D.; Combined Sclerosis. In the afternoon, Erwin R. Schmidt, M.D., professor of surgery at the University of Wisconsin Medical School, gave an illustrated lecture on Surgery of Perforating Ulcers of Stomach and Duodenum. J. P. Cogley, M.D., concluded the session with a talk on Postoperative Treatment.

Scott County

The Scott County Medical Society met in regular session, Tuesday, May 5, at the Chamber of Commerce in Davenport. Dinner was served at six o'clock, after which E. D. Plass, M.D., of the department of obstetrics and gynecology of the State University of Iowa, furnished the scientific program.

Van Buren County

Thursday, April 23, members of the Van Buren County Medical Society met in Milton, where they were guests of Dr. C. N. Stephenson at a chicken dinner. The program consisted of two papers: The Problems of Small Town Physicians, C. R. Russell, M.D., of Keosauqua; and Organized Medicine, C. N. Stephenson, M.D., of Milton.

Woodbury County

The regular meeting of the Woodbury County Medical Society was held Tuesday, May 5, at the Martin Hotel, in Sioux City, with W. F. Harriman, M.D., delivering an address on the Chronic Inflammatory Changes in the Cervix and Their Association with Malignancy.

Council Bluffs Medical Society

Dr. Gerald V. Caughlan was elected president of the Council Bluffs Medical Society at the annual meeting of that organization held at the Hotel Chieftain, Saturday, May 2. Dr. Isaac Sternhill was named vice president. The secretary and treasurer, Dr. Harriet Hamilton, and Dr. A. V. Hennessy, respectively, were re-elected to office.

Iowa Heart Association

At the annual meeting of the Iowa Heart Association held at the Fort Des Moines Hotel on Friday, May 15, the last day of the Iowa State Medical Society annual session, the following officers were elected: Dr. Fred M. Smith, of Iowa City, president; Dr. L. R. Woodward, of Mason City, vice president; Mr. T. J. Edmonds, of Des Moines, secretary. The executive committee is composed of Dr. E. L. Wurtzer, Clear Lake; Dr. J. C. Parsons, Creston; Dr. B. F. Wolverton, Cedar Rapids; Dr. A. A. Schultz, Fort Dodge, and Dr. R. N. Larimer, Sioux City.

Northwest Iowa Medical Society

The spring meeting of the Northwest Iowa Medical Society was held at the Arlington Hotel in Sheldon, Tuesday, April 28, with Dr. D. J. Gleysteen, of Alton, president of the society, in charge. After a six-thirty banquet, the business meeting of the organization was held, and the scientific program was presented as follows: Neurological Problems With Case Reports, Ernest M. Hammes, M.D., professor of neurology, University of Minnesota; The Toxemias of Late Pregnancy, William F. Mengert, M.D., Iowa City.

Tri-County Medical Society

Physicians from Henry, Jefferson and Washington counties gathered in Washington, Iowa, when the Tri-County Medical Society held the second meeting of the year, Tuesday, May 5. Those in attendance met in the community room of the Y. M. C. A. for a six-thirty dinner, after which Channing G. Smith, M.D., of Granger, and Mr. Vernon Blank, of Des Moines, presented a program on Medical Economics.

Waterloo Medical Society

A technical discussion of intracranial lesions was delivered before the members of the Waterloo Medical Society, Tuesday, April 21, by Sanford Gifford, M.D., faculty member of the College of Medicine, Northwestern University.

Tuesday, May 19, W. A. Fansler, M.D., faculty member of the College of Medicine, University of Minnesota, addressed physicians of Waterloo and surrounding towns, on rectal diseases. Dr. Fansler showed motion pictures of delicate operations and explained certain new departures in treatment.

AUXILIARY NEWS

The Annual Session of the Women's Auxiliary of the Iowa Medical Society

During the annual session of the Iowa State Medical Society in 1929, the non-professional women in attendance perfected an auxiliary for the purpose of promoting social contacts between the wives of Iowa physicians, to advance their appreciation of medical problems and to assist the members of the State Society in the furtherance of their professional work. This organization has now developed to a point where much enthusiastic interest is being manifested in the project.

At the recent session of the organization 184 members were in attendance. An extensive program had been arranged which was generously attended at every session by the visiting ladies. On Wednesday, May 13, while the men were being entertained at the Annual Smoker, the women attended a card party arranged in the Oak Room of the Hotel Fort Des Moines. On Thursday morning the Auxiliary met in a second session with Mrs. E. L. Bower presiding. Preceding the address of the occasion, delivered by Dr. George W. Mackenzie of Philadelphia, the necessary business for the year was transacted. The following officers were duly elected: Mrs. Channing G. Smith of Granger, president; Mrs. P. B. McLaughlin of Sioux City, president elect; Mrs. L. F. Talley of Marshalltown, first vice president; Mrs. Walter L. Bierring of Des Moines, second vice president; Mrs. J. C. Donahue of Centerville, third vice president; Mrs. E. L. Lampe of Bellevue, fourth vice president; Mrs. James A. Downing of Des Moines, secretary, and Mrs. William Seidler of Jamaica, treasurer. Mrs. William Jepson of Sioux City, and Mrs. E. L. Bower of Guthrie Center, were chosen as delegates to the American Medical Association Auxiliary. Mrs. Bower was chosen as historian; Mrs. Tom B. Throckmorton of Des Moines, as publicity chairman, and Mrs. David H. Hopkins of Glidden, as chairman of the hygeia committee.

On Thursday afternoon the Auxiliary was entertained at a luncheon at the Wakonda Country Club. Following the luncheon, Reda Rauch Strauss entertained with a series of play readings entitled "Once in a Lifetime."

Dallas-Guthrie Auxiliary Meeting

Thursday, April 22, the Dallas-Guthrie Auxiliary met at Panora in the club room of the library. Miss Thora Brookings, president, presided over the meeting and introduced the following speakers: John H. Peck, M.D., who spoke on The Foe of Youth; Daniel J. Glomset, M.D., who discussed Our Health Program; and C. M. Porter, M.D., of Woodward, who presented a paper on The Silent Sickness.

INTERESTING NEWS

In Brief

Retiring President of the State Society, Dr. W. A. Rohlf, of Waverly, stated before the House of Delegates that during his year of administration he had traveled 13,000 miles (the equivalent of halfway around the world), visited thirty medical societies, delivered thirty addresses and made fifteen trips to Des Moines on society business—an enviable record of service.

Members of the Illinois Homeopathic Medical Association in recent session are said to have passed a resolution for presentation to the General Assembly of that state, in which they recommend legalizing "a painless death sleep" to be administered to all imbeciles and victims of incurable disease as a means of relieving misery and lessening economic stress.

Norman Baker, enjoined by the Supreme Court of Iowa from the unlawful practice of medicine in connection with the Muscatine Cancer Hospital, has recently announced that under terms of a lease, effective May 11th, one W. W. Potter, formerly of Morning Sun, will assume charge of the Baker Institute.

Harry Hoxsey, formerly associated with the notorious Norman Baker of Muscatine, recently enjoined from the unlawful practice of medicine in Iowa, has been found guilty of the illegal practice of medicine in Detroit, and on this charge is subject to a fine of $200 and six months in jail.

The cancer rate for Iowa continued to show an increase in 1930 when, according to Health Commissioner D. C. Steelsmith, the death rate rose to 117 deaths per 100,000. There were 2,890 deaths from cancer during the year in Iowa.

A notice for bids has been published by the Board of Hospital Trustees of Decatur County for the erection of the new county hospital to be constructed at Leon. The contract will be awarded at an early date

The United States Veteran Hospital at Knoxville, held open house on Hospital Day, May 12, entertaining several hundred legionnaires attending the Seventh District Legion convention in that city.

A plan of hospital insurance has been evolved by the Community Hospital at Grinnell, which provides hospital care for a period of not to exceed three weeks per year at a cost of $8.00 a year per person.

W. A. Benadom, practitioner of "physio-medical system" of medicine in Davenport has been permanently enjoined from the practice of medicine in the state by an order of the Scott County District Court.

The fourth of a series of instructive discussions on health matters sponsored by the Washington County Medical Society appeared in the Kalona *News* of April 23. This dealt with diabetes.

Mr. and Mrs. Henry Pfeiffer of New York City, have recently announced a gift of $25,000 to the Allen Memorial Hospital at Waterloo, for the construction of a new nurses' home.

The Iowa Hahnemann Medical Association recently convened in Des Moines, in annual session. Dr. H. C. Woods of Tama, was chosen president of the body for the ensuing year.

PERSONAL MENTION

Dr. J. R. Wright, of Knoxville, has recently been promoted from the rank of captain to that of major in the medical section of the Officers Reserve Corps.

Dr. E. A. Hunt, formerly of Burlington, and more recently assistant physician at the Northern Hospital for the Insane, Winnebago, Wisconsin, has accepted a position as assistant physician at The Retreat in Des Moines.

Dr. Karl Werndorff, of Council Bluffs, addressed the local Rotary Club, Friday, May 1, in a discussion of "The Problem of the Crippled Child."

Dr. E. L. Meredith, who for the past two years has been practicing medicine at Marble Rock, has located in Garrison.

Dr. R. A. Vorpahl, of Cedar Rapids, **Dr. J. H. Robbins** of Sioux City, and **Dr. William Carpenter** of Altoona, were elected president, vice president and secretary-treasurer, respectively, of the Iowa Coroners Association at the annual meeting held in Des Moines, Friday, May 15.

Dr. Gerald V. Caughlan, of Council Bluffs, was the guest speaker at the Glenwood Rotary Club dinner, Thursday, April 23. His talk was on "The Values and Dangers of Advertising."

Dr. Jennings Crawford, of Cedar Rapids, was made president of the Iowa Medical Directors Association at the annual meeting held in Des Moines, May 12.

Dr. J. F. Edwards, of the department of hygiene, Iowa State College at Ames, was the speaker of the evening for the Melbourne Community Club, at the meeting held Thursday, April 23. He spoke on "The Origin and Progress of Medicine."

Dr. F. L. Knowles was chosen president of the Fort Dodge Rotary Club for the club year, beginning July 1, when the board of directors met Thursday, April 23.

Dr. A. V. Hardy, of Iowa City, addressed the Brooklyn Commercial Club Monday, May 4, speaking on the general subject of health, with public health and sanitation as the main topics.

Dr. Carl Wahrer, who was for many years a practicing physician in Fort Madison, has returned from California, where he has been for the past eight years, and will locate in Seymour.

Dr. Edmund J. Tierney, Sioux City physician, has been promoted to the position of captain in the Medical Reserve Corps, according to an announcement recently received from Washigton.

Dr. Charles H. DeVaul, for three years a practicing physician in Vinton, has accepted an appointment in the department of ophthalmology at the State University of Iowa, and will begin his work at Iowa City on July 1.

Dr. J. E. Brinkman, newly elected president of the Waterloo Rotary Club, will be installed Monday, June 29. Dr. Brinkman is also the president of the Waterloo Civic Music Association.

Dr. R. H. Crawford is leaving Algona, June 1, for Indianapolis, where he has accepted medical research employment with the Eli Lilly Company.

Dr. George Donohoe, superintendent of the State Hospital for the Insane at Cherokee, gave the principal address at the annual convention of the Cherokee Federation of Women's Clubs, Saturday, April 25. The subject of his talk was "Mental Hygiene."

Dr. B. Raymond Weston, of Mason City, was elected president of the local Rotary Club at a recent meeting of the board of directors.

NATIONAL SOCIETIES HONOR IOWA PHYSICIANS

Dr. John H. Peck, of Des Moines, was elected first vice president of the National Tuberculosis Association at the annual meeting of that organization in Syracuse, New York, May 12-15. A week later, Dr. Martin I. Olsen, also of Des Moines, was honored by being named secretary of the medical section of the American Life Convention.

DEATH NOTICES

Blaise, Theodore Thomas, of Mason City, died May 15, at the age of seventy-two, following an illness of several weeks. He was graduated in 1887 from the Missouri Medical College of St. Louis. He had just been made a life member of the Iowa State Medical Society.

Doran, Lyle Williams, of Sioux City, died May 4, at the age of thirty-two, of embolism resulting from rheumatism. He was graduated in 1923 from the Creighton University Medical School and at the time of his death was a member of the Woodbury County Medical Society.

Prentiss, Henry James, of Iowa City, died May 17, at the age of sixty-three, as the result of a sudden heart attack. He was graduated in 1898 from the Bellevue Hospital Medical College and at the time of his death was a member of the Johnson County Medical Society.

Watson, Edward L., of Bode, died May 13, at the age of sixty-four, following a years' illness. He was graduated in 1889 from the University of Illinois College of Medicine and at the time of his death was a member of the Humboldt County Medical Society.

Wilson, Maurice Edward, of Estherville died May 16, at the age of sixty-two, after an illness of more than a year. He was graduated in 1897 from the State University of Iowa College of Medicine and at the time of his death was a member of the Emmet County Medical Society.

Wright, John Casey, of Clear Lake, died May 14, at the age of eighty. He had been ill with pleurisy for some time but death came suddenly. He was graduated in 1880 from the State University of Iowa College of Medicine and had just been made a life member of the Iowa State Medical Society.

SECRETARY WILBUR REPORTS ON MEDICAL COSTS

Secretary Wilbur, chairman of the committee investigating medical costs in the United States, recently reported that $3,000,000,000 are spent annually in this country through medical channels. About $1,000,000,000 of this amount was paid to physicians. Hospitals received an amount in excess of $500,000,000, while the dentists of the nation collected some $400,000,000 for their services. He stressed the relatively small amount spent for public health purposes. The committee's investigation indicated that less than $100,000,000 was spent in the United States during the year for all forms of public health advancement.

100th ANNIVERSARY OF THE DISCOVERY OF CHLOROFORM

One hundred years ago this year three workers working independently discovered chloroform. In America the discovery was made by Dr. Samuel Guthrie, working at Sacket Harbor, New York, with a mixture of chloride of lime and alcohol. He gave the name of "a spiritous solution of chloric ether" to his product. During the same year, 1831, he demonstrated this product at Yale University in the laboratory of Benjamin Stillman, an outstanding pioneer in chemistry at that time. Dr. Guthrie did not live to see the introduction of chloroform as an anesthetic in surgery although in the year of his death, 1848, such a demonstration was held.

Sir James Y. Simpson of Edinborough introduced chloroform as an anesthetic in obstetrics, and it is said that Queen Victoria was the first member of royalty to accept this anesthetic during childbirth.

The National Research Council Advisory Committee has recommended a display commemorating the discovery of chloroform in the Century of Progress in Chicago in 1933.

MARION COUNTY GETS CONTRACT

The Marion County Medical Society has recently been awarded the contract for medical services to the indigent by the supervisors of Marion County for the ensuing year. This is the ninth year that this arrangement has been effected. The contract calls for the amount of $2450 to be paid quarterly in sums of $607.50. As a result of the ruling of the Attorney-General's office that a corporate body cannot practice a learned profession, the society is operating under a group and agent practice plan.

NEW OFFICERS FOR IOWA MEDICAL WOMEN

When the State Society of Iowa Medical Women met in Des Moines, Tuesday, May 12, they elected the following named physicians to serve the organization as officers during 1931: Dr. Grace Sawyer of Woodward, president; Dr. Zella White Stewart of Iowa City, vice president; Dr. Nelle Noble of Des Moines, secretary; and Dr. Jeanette Dean-Throckmorton of Des Moines, treasurer.

BRANN OPENS EXCLUSIVE PHARMACY

Elsewhere in this issue will be found the formal announcement of Denny Brann, Des Moines druggist, which we feel merits special notice since his plan of operation is an innovation and has been formulated upon lines of strict ethics.

In a ground floor location on one of the principal business streets, Mr. Brann has established an exclusive pharmacy which will specialize in filling prescriptions for members of the medical profession only. In this day of "drug store prescribing" and the chain drug store, so-called, with its general line of merchandise, this step would seem to be one in a direction which should meet with the approval of the medical profession.

The unusual equipment and furnishings of the new store and the comfortable arrangements for waiting customers give it an air of professional dignity; and it is the expressed hope of the proprietor that this departure may mark a new era in drug stores and their relationship to the profession.

HISTORY OF MEDICINE IN IOWA

Edited by the Historical Committee

DR. WILLIAM JEPSON, Sioux City
DR. ARTHUR D. WOODS, State Center
DR. FRANK M. FULLER, Keokuk
DR. WALTER L. BIERRING, Des Moines
DR. NORMAN F. MILLER, Iowa City

Medical History of Washington County

C. A. BOICE, M.D., Washington

Washington County was opened for settlement in 1835. In 1836, Adam Ritchie and John Black established the first permanent abodes in this county on Crooked Creek, south of Crawfordsville. Within a very few months, other settlements were being established. These communities needed and attracted medical men and soon doctors were among those present.

Dr. Horace Carley located at Brighton in 1839, lived but a few months, dying the same year, and his was the first burial in the newly established cemetery.

The next medical man of whom we have any record was Dr. Samuel Mealey who located in Dutch Creek Township in 1840. He was a graduate of Jefferson Medical College, and a veteran surgeon of the War of 1812. He educated two sons for the profession. Dr. Wm. Mealey located in Des Moines, but his early death (1864) ended a life which gave great promise of efficiency. His brother, Dr. Thos. Mealey, located in Pleasant Plain where he obtained a large following, staying until 1876. Dr. Samuel Mealey died of old age in 1871. Schofield reported that he had moved to Keokuk.

Records of the Rev. G. C. Vincent, a pioneer minister, show that Drs. G. H. Stone and W. G. Lea were in Washington in 1841. Within a year or so Dr. Cleaves came in also. (1843.)

Without doubt, Dr. G. H. Stone was the first physician in the town of Washington, coming in 1840. His family was the twelfth in the village. Dr. Stone had been surgeon in the United States Navy, was of military bearing and action, gruff, taciturn, uncommunicative and did not take well with patients. He was well educated; sometimes profane, and given to occasional sprees. He was appointed on a committee, by authority of the territorial legislature, to select a name for the county seat of Keokuk County. Sigorney was selected, that being the name of a poetess whose writings he admired. Stone left Washington, returning to Illinois in 1843.

Dr. Lea combined other businesses such as horse trading, carpentering and house building with medicine. He left in 1843, stopping for a time at Oskaloosa, then following the westward trail. Dr Cleaves did not fit into the pioneer manner of living and never succeeded in building up much of a following. He moved to Columbus City in 1846, where he died about 1860.

Dr. Isaac Crawford came to Crawfordsville in 1841, the first physician there. Three brothers-in-law, Neal by name, had preceded him and were plotting a town site. The town was named Crawfordsville for the doctor. Dr. Crawford was born at Argyle, New York, and obtained his medical education in the medical college at Columbus, Ohio, finishing in 1841. The Crawford family was intensely patriotic. One son was an associate of John Brown and he, with others of the family, was very active in the underground railway, and many in the family took an active part in the Civil War.

Dr. Lefler came to Washington in 1840, and died in 1843 or shortly afterwards.

Dr. W. H. H. Rosseau came from Kentucky in 1844. He was a small man, rough, forceful and energetic. Dr. Wm. McClelland came in 1845 from Pennsylvania. He was small of stature, very capable and ambitious. He and Rosseau for the next thirty years worked much together, even though exact opposites in nearly every characteristic by which men may be measured. McClelland returned east in 1845, came back in 1846, and continued his work until his death in 1902.

Dr. O. H. Prizer located in Brighton in 1845.

In the years following, doctors came thick and fast and it was not long until each village and hamlet and even crossroads had its medical men.

In addition to those just mentioned we learn of Dr. Mallet in Brighton; Dr. Van Pelt was the first in Clay Township, to be followed by Dr. Henry Pringle (he was one of eight boys and girls of this township in an early day to take up medicine); E. J. Meachem, dead; Henry Pringle, dead; Herman Gowey, graduate Keokuk Medical College and College of Physicians and Surgeons, 1907, New Kirk, Oklahoma; David Beach; W. M. Brinton, State University of Iowa and Jefferson Medical College, 1911, Denver; Hattie Whitacre, dead; Ranny Hall, dead; J. W. Niewkirk, College of Physicians and Surgeons, Chicago, 1890, Gary, Indiana.

Dr. James Watters, the first of the eclectic persuasion in the county, located at Wassonville, and moved to Kansas in 1856. Dr. James Petit came to Lime Creek, Dr. J. C. Robertson to Dutch Creek, Dr. H. T. McLaughlin located first at Brighton, then Washington, then Havre.

Dr. McLaughlin afterward went as a medical missionary of the United Presbyterian Church to Egypt. He was sent south to the Sudan, the first doctor ever to penetrate that country. He returned to the United States and died in Ohio several years ago.

Dr. L. B. Oliver at Dublin moved to Sigourney and was followed by Dr. G. H. Hood, who died in Washington, of old age.

Dr. G. C. Wallace located at Grace Hill, and later moved to Omaha.

Dr. J. W. Morgan was born in 1837, and was graduated from the College of Physicians and Surgeons, Keokuk, in 1876. After practicing in Lexington one year (1878) and four years in Daytonville, he came to Wellman in 1882. Drs. W. P. Gardner, S. J. Smith (who later moved to Iowa City and died there), J. A. Riggin, Schofield (1866-1869), A. J. Droz, L. M. Downing, J. E. Wells, H. M. Austin (moved to Ohio), Enos D. Miller, and A. L. Braden, are other Wellman practitioners.

Dr. Simon P. Teeple was the first physician to locate in English River. He married a sister of the aforementioned Dr. Stone. Dr. Teeple was named county commissioner in 1839, which office he held until 1851, when he moved to Iowa City where he soon died. He does not figure much as a physician but his name appears very often in land titles.

Dr. John Hamilton was another early doctor in English River. He was also a Methodist minister.

Dr. E. R. Jenkins located at West Chester, and was followed by J. G. Henderson, E. J. Caldwell and A. J. Droz.

Dr. E. A. Cobb started at Richmond and was followed by H. Von Metzradt, G. H. Eiskamp and J. M. Chittem. Dr. John M. Ritter, a State University of Iowa graduate, located there in 1882.

At Riverside we learn of Drs. J. M. Glasgow, Wm. Ott, Joseph Sheafe, Cyrus Burrows, D. S. McConaughy, J. F. Kempker, Geo. Maresh (now in Iowa City), C. S. Grant (died in Iowa City about 1925), E. E. Blythe, J. W. Wilson (now in Strawberry Point) and G. W. Younkin.

We have records of the following physicians at Kalona: Drs. L. C. Round, B. F. Allen (in mercantile business for some 25 years), F. H. Kisor (now at Mechanicsville), Hammer (moved to Ottumwa), E. E. Stutsman (moved to Washington), J. E. Wolfe (now in Iowa City), J. E. Wells (moved to Wellman, died there), C. G. Tilden, and John L. Fry.

At Ainsworth there have been Drs. Bannister, Frank Tustison, S. P. Eckles (died in 1875), Wm. Crawford (changed to dentistry), A. S. Cowden, D. M. Keister, J. C. Boice (Washington), J. H. Hull (Washington, now dead), J. A. Gardner (Kansas, now dead), E. T. Wickham (Washington), Fred Woodburn (died of tuberculosis), S. P. Hewins, H. B. Hamilton (Omaha), A. J. Droz (died in Washington), A. J. Laird (Des Moines), W. L. Alcorn (Washington), C. E. Buckley (returned to Kansas), and H. M. Mahin.

Our records show the following named physicians at Brighton: Drs. H. Cushman; R. F. Parsons; J. W. Caldwell; O. H. Prizer; M. C. Terry; G. W. Dosh (also a druggist, dead); W. S. Parks (Packwood); G. W. Taylor (moved to Wyoming); R. A. McGuire (Fairfield); G. W. Welsh (did not return after World War); A. E. Forte (Iowa City); W. W. Williams; N. A. Sloan (has worked in a machine shop 25 years).

At Lexington we had Drs. John V. Martin and Wilkins.

The following physicians are listed at Crawfordsville: Drs. J. D. Miles, H. C. Hull, Sr., W. D. Crawford, T. W. Bennett (moved to Lenox), Z. E. Beenblossom (moved to Oklahoma, killed a few years ago in a holdup). E. T. Wickham (spent one year there with H. C. Hull), F. P. W. Lindsay (died in Davenport a few years ago), C. W. Gardner (now in Mt. Pleasant). A. L. Mendenhall, C. W. McLaughlin (Washington), G. F. Niblock (Derby), S. W. Huston (Mt. Pleasant), W. H. McCaw (practiced in Swedensburg and Winfield, and died in Nebraska a few years ago), N. J. Lease.

Dr. T. J. Maxwell, long time professor of surgery in Keokuk was raised in Crawfordsville.

Dr. Sales, a Brighton doctor, was shot in the abdomen by a dentist in 1868, and died shortly afterward. The dentist was not apprehended.

Dr. Darius Schofield came to Wellman in 1866, and moved to Washington in 1869. Thereafter, most of the activities of the doctors are a matter of authentic record. Dr. Wm. F. Rodman came in 1856 and died in 1882. Dr. A. H. Van Sickle, a botanic doctor, born in West Virginia in 1813, practiced ten years in Ohio, and came to Washington County in 1856, a farmer. However, he did not practice medicine here so far as any record shows.

Dr. Fordyce Rice, who was born in Massachusetts in 1806, came to the county in 1863 and was probably the first homeopath. He was a student of Albany Medical College, licensed by examination. Dr. A. W. Chilcote was a physician but did not practice in Iowa, although he was active in the drug business and banking.

The names of Drs. Samuel Marshall and Nelson Van Patton have been handed down, but no record has been found, as to their location, history or activities, except that Dr. Marshall is known to have worked for many years at the cabinet making trade for Wallace and Wilson and presumably practiced medicine very little.

(To be continued)

OBITUARY

HENRY JAMES PRENTISS, M.D.

1867-1931

Doctor Henry James Prentiss was born at Flushing, New York, July 22, 1867. He was of Revolutionary stock on both sides of his family. He graduated in Engineering from Stevens Institute of Technology in 1889 and later took up the study of medicine and received his degree from the Bellevue



Medical College in 1898. From 1898 to 1904 he was a member of the staff of the Department of Anatomy at his Alma Mater. Since 1904 he has been professor and head of the Department of Anatomy at the University of Iowa, College of Medicine. He died suddenly May 17, 1931, at his home in Iowa City of coronary thrombosis.

It is impossible for me to express a true picture of the great worth of this active life. Time, I am sure, will give him the place of the most valued anatomist of the century.

Doctor Prentiss had a rare combination of gifts that particularly and peculiarly fitted him to render a life so full of service and inspiration. He was a charming gentleman. He had a keen sense of humor and was filled with the youthful joy of living. His industry was tremendous and his endurance seemed limitless. He loved his friends deeply and they in turn were devoted to him. His soul was filled with human kindness and his generosity was endless. He was a man of vivid color. He was a man of superlatives.

As a teacher he had few equals. He not only knew what knowledge to impart but he was a master in the art of making it clear and simple. But besides this he had the very rare gift of being able to stimulate and actually inspire his students. He had that divine spark which made his enthusiasm infectious.

As an anatomist Doctor Prentiss was unique. His whole conception of the development and structure of the human body was original and sound and his entire work was therefore a continuous, progressive research, as well as a work of accomplishment. His knowledge of morphology was profound but his keenest and primary interest was always found in those problems of anatomy that had to do with the explanation of physiology and the development of pathology and particularly in the anatomy that aided in the diagnosis and treatment of disease. He was truly a clinical anatomist, and above everything else a doctor.

His religion knew no creed but was a simple and devout belief in an all-wise and all-powerful God and a profound faith in a life hereafter. May it be the prayer and the belief of all of us who loved him and were so deeply loved by him that he is now united with his dear wife and that for them the sun will be ever shining and the wild flowers ever blooming and that the contentment which they so amply earned and so loved will be theirs forever.

N. G. Alcock, M.D.

Doctor Prentiss came to Iowa City as professor of anatomy in the fall of 1904 to succeed Dr. John W. Harriman who died the previous January. Doctor and Mrs. Prentiss were a distinct addition to the social life of the little college town; with their rare gift of conversation, inimitable humor, and the spirit of real culture they soon endeared themselves to everyone.

Doctor Prentiss brought to Iowa a flavor of the older institutions of the East combined with a scientific enthusiasm and high purpose that were destined to have a profound influence upon the future development of our medical school. He introduced three definite innovations into the teaching of anatomy:—1. carefully prepared dissections, 2. the topographical method, 3. special, or applied anatomy.

The enthusiasm of Doctor Prentiss for a wider application of anatomic knowledge in the recognition and treatment of disease led to the development of graduate courses which became very popular, and were extended in the different fields with each succeeding year. The fact that his colleagues on the Medical Faculty attended these lectures and demonstrations over a period of years, was the highest testimony of their useful purpose. The influence of this teaching was further recognized in the character of investigative research, and operative services of the other departments of the institution. The Prentiss school of Anatomy soon became an established part of the University, and was a most potent factor in carrying the name of the Iowa School of Medicine far afield.

His was a unique and attractive personality that left the impress of his character upon students and friends which time will not efface. The association with Doctor and Mrs. Prentiss will always be one of the cherished memories of our life in Iowa City.

Walter L. Bierring.

THE JOURNAL BOOK SHELF

BOOKS RECEIVED

*CHININ IN DER ALLGEMEINPRAXIS UNTER BERUECKSICHTIGUNG PHARMAKOLOGISCHER BEFUNDE—Von Dr. Med. Fritz Johannessohn.—Bureau Tot Bevorderung von Het Kinine-Bebruik, Amsteram-W., 1930.

CLIO MEDICA—IV—INTERNAL MEDICINE—By Sir Humphry Rolleston, Bart.—V PHYSIOLOGY.—By John F. Fulton, M.D.—Edited by E. B. Krumbhaar, M.D.—Published by Paul B. Hoeber, Inc., New York, 1930.—Price, $1.50 for each volume.

*DEFORMITATEN UND KOSMETISCHE OPERATIONEN DER WEIBLICHEN BRUST—By Herman Biesenberger—with 161 illustrations—209 pages.—Published by Wilhelm Maudrich, Vienna, 1931.

*DIE TECHNIK DES UNGEPOLSTERTEN GIPSVERBANDES—By Dr. Fritz Schnek, Oberarzt des Unfallkrankenhauses Wien.—Verlag von Wilhelm Maudrich, Wien, 1931.—169 illustrations.

*HEMORRHOIDS—THE INJECTION TREATMENT AND PURUITUS ANI.—By Lawrence Goldbacher, M.D.—207 pages, illustrated with 31 half-tone and line engravings—some in colors.—Second Edition, Revised.—F. A. Davis Company, Philadelphia, 1931.—Price, $3.50.

*INTESTINAL TUBERCULOSIS: ITS IMPORTANCE, DIAGNOSIS AND TREATMENT. (A Study of the Secondary Ulcerative Type.) By Lawrason Brown, M.D., and Homer L. Sampson. Second Edition, thoroughly revised.—Illustrated with 122 engravings and two colored plates. Lea & Febiger, Philadelphia, 1930.—Price, cloth, $4.75.

*PHYSICAL DIAGNOSIS—By Warren P. Elmer, M.D., Associate Professor of Clinical Medicine, Washington University School of Medicine.—and W. D. Rose, M.D., Late Associate Professor of Medicine, University of Arkansas.—903 pages, with 337 illustrations.—C. V. Mosby Company, St. Louis, 1930.—Price, $10.00.

*PRACTICAL THERAPEUTICS, With Especial Reference to the Application of Remedial Measures to Disease and Their Employment Upon a Rational Basis.—By Hobart Amory Hare, M.D., LL.D.—21st Edition—1104 pages, with 145 engravings and 6 plates.—Lea & Febiger, Philadelphia, 1930.—Price, $7.50.

*PROGRESSIVE MEDICINE—March, 1931, Vol. I.—A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences.—Edited by Hobart Amory Hare, M.D., LL.D.—Professor of Therapeutics, Materia Medica and Diagnosis, Jefferson Medical College, Philadelphia.—assisted by Leighton F. Appleman, M.D., Instructor, Jefferson Medical College.—Lea & Febiger, Philadelphia, 1931.—Price, $3.50 per volume; $12.00 per annum.

*SURGICAL CLINICS OF NORTH AMERICA—(Pacific Coast Number)—Volume x, No. 5, October, 1930.—(Issued serially one number every other month.) 271 pages with 136 illustrations.—Per Clinic Year (February, 1930 to December, 1930)—Paper, $12.00; cloth, $16.00. W. B. Saunders Company, Philadelphia and London, 1930.

*A TEXTBOOK OF LABORATORY DIAGNOSIS—With Clinical Applications for Practitioners and Students—By Edwin E. Osgood, M.A., M.D., Assistant Professor of Medicine and Biochemistry, University of Oregon—and Howard D. Haskins, M.D., Professor of Biochemistry, University of Oregon.—With 21 figures and 6 colored plates.—P. Blakiston's Son & Co., Inc., Philadelphia, 1931.—Price, $5.00.

*THE TREATMENT OF CHILDREN'S DISEASES—With Special Formulas and Drugs for Childhood, and a Short Diagnostic Summary of Each Clinical Picture.—By Professor F. Lust, Director of the Children's Hospital, Karlsruhe.—Authorized Translation of the Sixth German Edition, with Additions by Sandor A. Levinsohn, M.D.—J. B. Lippincott Company, Philadelphia and London, 1930.—Price, $8.00.

Review appears in this issue.

BOOK REVIEWS

CHININ IN DER ALLGEMEINPRAXIS UNTER BERUECKSICHTIGUNG PHARMAKOLOGISCHER BEFUNDE

Von Dr. Med. Fritz Johannessohn. Bureau Tot Bevorderung von Het Kinine-Bebruik, Amsteram-W, 1930.

This modest paper covered volume is an advertisement as its title page frankly states, and as such will be sent free to any physician who requests a copy. In this day of advertising there is nothing remarkable about this, but the volume is unusual because of the exhaustive manner in which it covers its subject, the history of quinine, its occurrence and preparation, chemistry, excretion, therapy, toxicity, dosage and incompatibles, and, finally, a lengthy bibliography. The chapter on by-effects and toxicity is particularly interesting since frank discussion of these subjects is unusual in literature of this type. The final chapters of the book are devoted to a much briefer discussion of quinidin, and a fairly comprehensive bibliography. C.B.L.

DEFORMITATEN UND KOSMETISCHE OPERATIONEN DER WEIBLICHEN BRUST

By Hermann Biesenberger. With 161 illustrations. 209 pages. Published by Wilhelm Maudrich, Vienna, 1931.

Dr. Biesenberger's monograph on cosmetic surgery of the breast is well illustrated, always an important point in an operative surgery, and particularly important in this case since it makes the subject matter available to the surgeon who might have some difficulty with the German text. The text covers the subject methodically and well, taking up the biology, physiology, anatomy, and pathology of the breast and stressing the psychic effect of such deformities upon the patient. The author feels that cosmetic surgery of the breast is as justifiable as, say, cosmetic surgery of the nose, but that the greater danger attendant upon breast surgery demands that such surgery be attempted only by the skilled surgeon. C.B.L.

DIE TECHNIK DES UNGEPOLSTERTEN GIPSVERBANDES

(The Technique of the Unpadded Plaster Bandage.) By Dr. Fritz Schnek, Oberarzt des Unfallkrankenhauses Wien. Verlag von Wilhelm Maudrich, Wien, 1931. 169 illustrations.

The author is first assistant to Dozent Böhler, Chief of the Accident Hospital in Vienna, where this technic was developed. The book is divided into four sections: general considerations, special conditions, ex-

tremities, and trunk and head. Each section is well illustrated and outlines the special methods applicable to the special parts.

We recently had the pleasure of observing the work and technic described in the Böhler Clinic where considerable more use is made of the plaster bandage than one is accustomed to seeing in this country. No skin preparation is done. Open wounds are cleansed and may or may not have a window cut. No padding is used, the plaster being applied directly to the skin.

The book is well written as to detail, though not to the minutia as are many German texts. Many new ideas are presented in the treatment of injured extremities. A translation would be worth while.

N.B.A.

HEMORRHOIDS—THE INJECTION TREATMENT AND PRURITUS ANI

Lawrence Goldbacher, M.D. 207 pp., illustrated with 31 half-tone and line engravings—some in colors. F. A. Davis Company, Philadelphia, 1931 (Second Revised Edition). Price $3.50.

This book is intended for the general practitioner. It covers the subject in a short concise manner and is written in an easily understandable language. The technic of the treatment is given in detail. However, the book is somewhat misleading from the standpoint of the proctologist. The limitation in the usefulness of the injection method is not carefully drawn, and precautions in its use not given sufficient

C.A.S.

INTESTINAL TUBERCULOSIS; ITS IMPORTANCE, DIAGNOSIS AND TREATMENT

(A Study of the Secondary Ulcerative Type.) By Lawrason Brown, M.D., and Homer L. Sampson, Second Edition, thoroughly revised. Illustrated with 122 engravings and 2 colored plates.

This second edition of the well received monograph by Drs. Brown and Sampson contains revisions and additions which bring the subject matter entirely up to date. The general literature on the intestinal involvements of tuberculosis is meager and widely scattered. For this reason the profession will welcome a text collecting and correlating this information.

Intestinal manifestations of tuberculosis are too little stressed in the general management of this pulmonary disease and it has rightly been stated that the outcome of well managed tuberculosis frequently rests upon the recognition and treatment of the intestinal manifestations.

The authors have had the opportunity of studying clinically and roentgenologically over 5,000 patients at the Trudeau Sanatorium and of this number have found over twenty per cent suffering from intestinal manifestations of the disease. Their studies include examinations in some 40,000 cases.

PHYSICAL DIAGNOSIS

By Warren P. Elmer, M.D., Associate Professor of Clinical Medicine, Washington University School of Medicine—and W. D. Rose, M.D., late Associate Professor of Medicine, University of Arkansas. With 903 pages and 337 illustrations. The C. V. Mosby Company, St. Louis, 1930. Price $10.00.

This book is essentially a new work although the author, Dr. Elmer, has made as a basis for this book, that one published under the same title by Dr. Rose, through five editions. The volume treats of the technic of physical examinations discussing both normal physical diagnosis and abnormal physical diagnosis.

Part I discusses technic, presenting in turn the clinical anatomy and physiology, observation, inspection, palpation, percussion, and auscultation. These sections are followed by ones dealing with special diagnostic procedures, such as electrocardiography, radiology, and various forms of mensuration.

Part II presents the physical diagnosis of diseases of the respiratory and circulatory system. The volume should be useful to the student and practitioner alike. The author is to be complimented especially upon his selection of illustrations, most of which are original and well chosen.

PRACTICAL THERAPEUTICS

With especial reference to the application of remedial measures to disease and their employment upon a rational basis. By Hobart Amory Hare, M.D., LL.D.; twenty-first edition; octavo; 1104 pages with 145 engravings and six plates. Cloth, $7.50 net. Lea & Febiger, Philadelphia, 1930.

This textbook on Practical Therapeutics needs no introduction to American physicians, since for the past forty years various editions of this work have been favorably known and accepted by the medical profession. Indicative of the meticulous care with which the author has maintained the standing of his volume, we cite the fact that this book is now in its twenty-first edition.

The form of the book remains unchanged. Part I is devoted to a general discussion of fundamental considerations in therapeutics; Part II, a detailed discussion of drugs and drug action; Part III is devoted to a discussion of those remedial measures other than drugs, and the general feeding and care of the sick; Part IV reviews the individual diseases tabulating the beneficial drugs suggested in each condition.

Dr. Hare in this edition discusses much of the newer thought in drug therapy including such items as the intravenous use of tartar emetic as a practical specific in the treatment of chancroids, the deleterious effect of prolonged dosage of cinchophen upon the liver, the newer advances in pituitary therapy, the newer views concerning the action of digitalis, the

intraspinal use of procaine, and the value of salyrgan as a diuretic in cardiac dropsy.

PROGRESSIVE MEDICINE

Vol. I, 1931, March. A quarterly digest of advances, discoveries and improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M.D., LL.D., Professor of Therapeutics, Materia Medica and Diagnosis, Jefferson Medical College, Philadelphia, assisted by Leighton F. Appleman, M.D., Instructor, Jefferson Medical College. Lea & Febiger, Philadelphia, 1931. Price, $3.50 per volume; $12.00 per annum.

This volume is the first of the 1931 series and epitomizes the progress in the several branches of medicine indicated by the table of contents. Each section has been written by a recognized authority and edited by the master physician, Hobart Amory Hare.

For the practitioner of today much of the general literature in medicine is lost since time will permit him to read but a small part of the voluminous publications offered in the many medical journals and textbooks. For such a physician a condensation such as that presented in this series is essential to keeping abreast the times.

This number covers the latest developments in the surgery of the head, spinal cord and peripheral nerve; in the surgery of the thorax including the breast and goiter; in infectious diseases; in diseases of children; and in rhinology, laryngology and otology.

SURGICAL CLINICS OF NORTH AMERICA

(Pacific coast number.) Volume 10, No. 5, October, 1930. (Issued serially one number every other month.) 271 pages with 136 illustrations. Per clinic year (February, 1930 to December, 1930), paper, $12.00; cloth, $16.00. W. B. Saunders Company, Philadelphia and London, 1930.

This volume is excellent and illustrates very well indeed the usefulness of this publication in that much clinical material can be reported which otherwise might be lost to our literature. Many rather unusual cases are reported briefly and to the point. Among them are spontaneous rupture of the renal pelvis, subclavian aneurysm, gas gangrene, aberrant renal vessels as the cause of kidney disease, closure of bronchial fistula, acute nonhemorrhagic pancreatitis, three unusual manifestations of infection of the lymphatics, and typical cases of carcinoma of kidney and cancer of the thyroid. F.W.F.

A TEXTBOOK OF LABORATORY DIAGNOSIS

With Clinical Applications for Practitioners and Students. By Edwin E. Osgood, M.A., M.D., Assistant Professor of Medicine and Biochemistry, University of Oregon, and Howard D. Haskins, M.D., Professor of Biochemistry, University of Oregon. With 21 figures and 6 colored plates. P. Blakiston's & Co., Inc., Philadelphia, 1931. Price $5.

This volume is an entirely new treatise and contains the essential methods of laboratory diagnosis in the most recent practice and application. The author of a volume on laboratory diagnosis is confronted with the problem of arrangement. The authors of this book have selected an arrangement which in our opinion is much superior to that frequently employed in that this volume stresses the bedside application of laboratory information in the observance of the patient, making as secondary and subsidiary the technical tests. Certainly the student will secure a much more logical viewpoint of the relation of laboratory tests to the problems of diagnosis and treatment from studying a volume of this arrangement.

By page citation the student may readily turn to the technical description of any and all tests indicated under a given condition. In the second part of the book the authors have attempted to report in ample detail the newer accepted methods in laboratory procedure. The book is not intended to be an exhaustive guide for laboratory directors or research workers. It adequately meets the need, however, of a reference book for the laboratory technician or the physician maintaining his own laboratory. Because of the excellent arrangement of the material and the fine illustrations, it will appeal very favorably to the general practitioner for reference.

THE TREATMENT OF CHILDREN'S DISEASES

With Special Formulas and Drugs for Childhood, and a Short Diagnostic Summary of Each Clinical Picture. By Prof. Dr. F. Lust, Director of the Children's Hospital, Karlsruhe. Authorized Translation of the Sixth German Edition with Additions by Sandor A. Levinsohn, M.D. Philadelphia and London, J. B. Lippincott Company, 1930. Price, $8.00.

As pediatrics is in reality general medicine limited only by the age of the patients, and as the general practitioner of medicine spends at least one third of his time treating infants and children, there certainly is a place on every physician's desk for a brief yet comprehensive book on the treatment of children's diseases.

Professor Lust's book is rather brief on the common diseases of internal medicine but describes the treatment of those diseases which are peculiar to childhood in detail. The author has described the methods of giving packs, baths, inhalations, etc., which are necessary in the treatment of childhood infections. He has given the proper dosage of drugs for the varying ages. The book includes directions for preparing the most useful foods for infants.

Its briefness and simplicity recommends it to the busy practitioner of medicine as a practical hand book in treatment of children. J.E.D.

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The JOURNAL
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VOL. XXI DES MOINES, IOWA, JULY, 1931 No. 7

GOITER*

C. B. LUGINBUHL, M.D., Des Moines

So much has been written and said in regard to the goiter problem that my choice of subject may seem an unfortunate one. That goiter is so much discussed, however, suggests an active interest in the subject, an interest shared by the physician in general practice, and by the clinician and the research man. This may be due in part to an increase in the incidence of goiter. On the other hand, the apparent increase may be explained by a better understanding of the various clinical conditions associated with thyroid disease, which we loosely group under the term goiter. My own increased interest in the subject has led to an intensive study of the last thousand cases of thyroid disease coming under observation on my service and on that of Dr. Oliver J. Fay. With few exceptions, it has been possible to keep these patients under observation for some time, either under medical treatment, or during the pre and postoperative period.

A majority of goiter patients are admittedly surgical—some 80 per cent in this study. Surgery at the present time offers the best therapeutic results in toxic adenoma and in true hyperplastic goiter, once medical treatment has made the patient a safe surgical risk. Some patients can never be made safe risks because of gravely damaged hearts or other associated pathology, but there remains an intensely interesting group. They do not present the dramatic picture which the acute exophthalmic goiter patient presents, nor do they give the same miraculous response to surgery. They demand great care in diagnosis because individualized treatment is essential, the need for and value of surgery problematic. They are a constant responsibility and a challenge to the man on the firing line.

Hyperthyroidism may give rise to few of the classic symptoms which we associate with this condition, and its masked forms thus often escape detection. I cannot here take up any discussion of goiter classification and pathology, but I do want to point out that the indiscriminate application of the term exophthalmic goiter to the varied forms of hyperthyroidism has placed undue emphasis upon exophthalmos. This symptom is more often absent than present in a series of unselected cases of hyperthyroidism and is often lacking even in acute hyperplastic goiter. Its association with tremor, tachycardia, and thyroid enlargement was once sufficient for the diagnosis of hyperthyroidism. Experience has taught us that any—I had almost said all—of these symptoms may be absent and the patient yet suffer from hyperthyroidism, but I would make an exception of tachycardia. I have seen no patient suffering from untreated hyperthyroidism who did not have an increased heart rate. With a demonstrably enlarged thyroid and an unexplained tachycardia, I feel that a diagnosis of hyperthyroidism is justified. Such a diagnosis should be followed by an active question mark; it is a tentative diagnosis, not an indication for operation.

An increased metabolic rate associated with a rapid heart is not necessarily indicative of hyperthyroidism. Even when associated with a palpable thyroid, these symptoms may have a different origin. The possibility of tuberculosis, in particular, is always to be considered, associated or unassociated with thyroid disease. In typical cases, particular note should be made of afternoon temperature, not on one but many days. Painstaking examination of the chest should be routine practice, supplemented by roentgenograms, repeated sputum examinations, and intradermal old tuberculin tests. Where hyperthyroidism and tuberculosis are associated, one therapeutic measure is always definitely indicated—rest and more rest. Whether the patient should have a thyroidectomy, and, if so, whether it should precede or follow a rest cure, also calls for answer. It is a matter of relative values and of fine discrimination. Operation may break the vicious cycle, and by lowering the basal metabolism, aid in arresting the tuberculous process. Sometimes a period of im-

* Address of Chairman, Section on Medicine. Presented before the Eightieth Annual Session, Iowa State Medical Society, Des Moines, May 13, 14, 15, 1931.

provement, with apparent relief from hyperthyroidism and arrest of the tuberculosis, is followed by a recurrence of symptoms. Often such patients have been subject to too great a strain, speaking from the standpoint of their own vitiated physical resources. Rest is a prime essential—not only during active treatment immediately following diagnosis, or before and after operation, but for a period of years, and to a modified degree, throughout life. This prescription the physician frequently finds difficult to enforce. Young patients lack the philosophy of life which would make them content to live within their physical and financial limitations. Even in patients whose age would suggest mature judgment, the nervousness usually associated with hyperthyroidism increases the difficulty of controlling their activities.

An early, atypical form of hyperplastic goiter is often observed as a result of physical strain, particularly when associated with over-drafts upon the nervous resources of youth. The girl who allows the scholastic and social demands of college life to exhaust her, not infrequently develops mild symptoms of hyperthyroidism during her freshman year. The young woman in the business world for whom the stress of work is not offset by some pleasantly diverting interest, or whose working days are supplemented by a full social calendar, is another frequent victim. The young mother whose home and children impose a greater burden than her physical stamina can support is also predisposed—sometimes apparently because there are no outside interests, sometimes because there are too many. The woman who has had repeated pregnancies in rapid succession is particularly prone to develop symptoms suggestive of hyperthyroidism. Nervousness and loss of weight are the most constant symptoms, but these are associated with a variety of other complaints. Gastro-intestinal symptoms are common; a non-productive cough, fatigability, a rapid pulse, emotional instability are other familiar complaints. They are also common in early tuberculosis, subacute bacterial endocarditis, hypertension, neuro-circulatory asthenia, nervous exhaustion, and visceroptosis. Some increase in the basal metabolic rate may be noted in any of these conditions, except in neuro-circulatory asthenia.

The medical profession has been slowly getting away from the catch-all diagnosis of neurosis or neurasthenia for every patient found difficult to fit into routine pathologic classification. This apparent advance is a sorry travesty if we substitute a diagnosis of hyperthyroidism and thyroidectomy for every patient with indefinite symptoms and a full neck. Hyperthyroidism is *one* of the possibilities to be considered, but with a basal metabolic rate of less than plus 30, medical treatment should be given a trial. Demands upon the patient's strength and nervous stability should be brought within the limitations imposed by her impaired physical and nervous resources. She should have definite rest periods during the day and long hours of sleep at night. Insomnia, colitis, and other incidental and co-incidental troubles should be relieved. Lugol's solution should be given for eight to fourteen days. If the patient does not respond to such treatment, it will frequently be found that the patient is not securing the required amount of rest and quiet. Hospitalization is often imperative. If the symptoms persist after absolute rest, if other complications—in particular, tuberculosis and focal infections—have been ruled out, and the basal metabolic rate is persistently high, surgery is at present the best we can offer.

The basal metabolic rate is also said to be increased in hypertension, but I have not found this to be particularly true of the early cases which clinically resemble hyperthyroidism. In fact, I have found a low basal metabolic rate in some patients with essential hypertension of a most malignant type. Moderate hypertension, on the other hand, is not infrequently associated with hyperthyroidism, and subsides with the relief of the latter. The relationship and relative importance of these conditions must be determined, since the question of surgery may rest upon them. Headache, nervousness, emotional instability, insomnia, loss of weight are common to both. An intention tremor may be confused with the fine tremor of hyperthyroidism. A palpable thyroid may be of the benign or functional type. Not only must the basal metabolic rate be determined repeatedly, but the blood pressure should also be taken at frequent intervals. In hypertension, both diastolic and systolic pressure are usually high. In hyperthyroidism, the pulse pressure is as a rule increased because the diastolic pressure is relatively low. In early hypertension, marked fluctuations in blood pressure are often noted, but in hyperthyroidism, the systolic pressure is particularly labile, and readily subject to emotional stimulation. Hypertension is a medical problem, and goiter surgery can be recommended only when close observation has demonstrated a probable causal relationship with hypertension, and then only if the patient is considered a safe surgical risk.

Cardiac symptoms are so common in hyperthyroidism that the gravity and significance of organic heart lesions are often overlooked, or underestimated. The brilliant results sometimes achieved

in patients with cardiac symptoms secondary to goiter are woefully lacking when organic injury has been done the heart. Goiter surgery in the presence of intractable auricular fibrillation, angina pectoris associated with coronary sclerosis, or hypertension with myocardial degeneration, is rarely successful from the standpoint of increasing expectancy and well-being. Rheumatic heart disease is not necessarily a contra-indication to operation if the lesion is fully compensated, and the diagnosis of hyperthyroidism definitely established. Prolonged rest, the judicious use of Lugol's solution, digitalis, quinidin, and the X-ray will often tide these patients safely through operation, but the doubtful benefits to the patient do not seem to justify the relatively high operative mortality.

Incidental mention has been made of the similarity of many of the symptoms of hyperthyroidism to those of visceroptosis, neuro-circulatory asthenia, nervous exhaustion, and constitutional inferiority. There is nothing to be gained and much to be lost by imposing the strain of operation upon an already depleted or bankrupt nervous system. It is quite conceivable that a constitutional inferior may develop a hyperplastic goiter and be relieved—of the goiter—by operation, but a constitutional inferior he will remain. In other words, surgery has less than nothing to offer such patients unless they have a definite surgical lesion. While the patient with a toxic psychosis associated with hyperthyroidism requires constant vigilance and special care during both the pre and the post-operative period, we may hope for recovery from his psychosis, providing always, of course, that hyperthyroidism stood in causal relationship to it.

Surgery itself contributes some medical cases. The patient with a persistent or recurrent hyperthyroidism should not be rushed into a second operation on the unsupported assumption that insufficient thyroid tissue had been removed. The first diagnosis may have been erroneous. The patient may be suffering from an endocrine dysfunction rather than from hyperthyroidism. Acute tetany is too painful and dramatic an incident to escape observation, but in its lesser manifestations it is not infrequently misinterpreted. In the presence of idiopathic or of postoperative tetany, thyroidectomy should never be advised unless the tetany can be brought definitely under control. The parathyroids may suffer further impairment, either directly from surgical trauma, or secondarily through injury to the blood and nerve supply. Parathormone is an effective but by no means an entirely safe method of treating parathyroid deficiency. Codliver oil, heliotherapy, intravenous calcium, and a diet rich in phosphorus, calcium, and vitamins are always indicated.

It is true that certain patients who apparently recover completely under conservative treatment will later develop symptoms of hyperthyroidism and require operation. Every surgeon with any considerable number of thyroidectomies to his credit has also had recurrences, and if these be added to his operative mortality I question that his surgical results will surpass those obtained by medical treatment in the type of cases here discussed. Moreover, the diagnostic rest period cannot be reckoned time lost, since it constitutes a desirable preliminary to operation, should the case prove surgical. The patients are kept in bed. Visitors are limited to members of the immediate family and these are encouraged to make their visits brief. Lugol's solution is given in 10 mm doses three times a day, and a grain of luminal or dial in the morning, a grain and a half late in the day, to insure rest.

In conclusion, the scalpel is a drastic and unsatisfactory instrument of diagnosis in hyperthyroidism. Preoperative diagnosis requires the use of modern laboratory equipment, but it also requires the equipment of our forefathers—time for observation and cultivation of the seeing eye.

The following case histories illustrate some of the cases of hyperthyroidism and of pseudo-hyperthyroidism which have been discussed:

Mrs. H. R. H., a teacher aged 30, had symptoms of vertigo and palpitation of some six months duration. Examination was negative except for slight tremor, some fullness of the neck, a pulse rate of 104, and a basal metabolic rate of plus 28. The symptoms subsided when Lugol's solution, bromides, and rest were prescribed, and she has carried on her work without difficulty in the four years that have since elapsed. While the thyroid is still palpable, the basal metabolic rate has remained below plus 10 during this time (at present plus 4), and the case may be classed as one of mild hyperthyroidism amenable to medical treatment.

Mr. C. C. B., an office worker aged 45, came in with a typical history of nervousness, hyperhydrosis, palpitation, slight dyspnea, and a hacking cough first noted following flu six years before. During the last five months the symptoms had become increasingly troublesome and there had been a weight loss of 25 pounds. The basal metabolic rate was plus 27. The sputum was examined and tubercle bacilli found. Following a bilateral partial lobectomy, the patient improved rapidly. When reexamined after six years, the basal metabolic rate was minus 13, there was no evidence of active tuberculosis, and the patient looked and felt well. In this case, thyroidectomy undoubtedly had a favorable influence on the associated tuberculosis.

Mrs. D. H., a housewife of 30 and the mother of

three children, eldest aged two and one-half years, the youngest three and one-half months, was referred for examination because of extreme nervousness, insomnia, and loss of strength. The patient was lethargic and depressed, in contrast to the usual nervous exhilaration of the hyperthyroid patient, and was inclined to be overweight. On admittance the basal metabolic rate was plus 17, but this rapidly fell to plus 6 after a few days' rest, and there was a general improvement in her condition. In nervous exhaustion, thyroidectomy would be an added burden, and is not advised.

Mrs. K. V. H., aged 73, gave a history of having first noted a nodular goiter following the birth of her youngest child, 35 years before. The history suggests that there have been repeated toxic crises in the intervening years. When she came under observation she had been losing weight rapidly for some weeks, felt weak and exhausted, and complained of increasing nervousness. Her pulse was rapid (above 100); the basal metabolic rate was plus 63, and a large nodular goiter was present. Because of the patient's age and a transient auricular fibrillation, the patient was not operated upon, but was given X-ray treatments. Following the second treatment, auricular fibrillation became more marked, and following the third treatment she developed a toxic psychosis of brief duration. The basal metabolic rate rose to plus 83, but a year after treatment it was plus 6, and the patient was able to carry on much as she had before her illness.

Mrs. R. D., a housewife of 48, stated that she had first noted palpitation of the heart and nervousness as a girl of 20. At the age of 43, she had been operated upon at another clinic, having a bilateral ligation and bilateral lobectomy in four stages. She had had a stormy convalescence, but eventually made a fair recovery and was fairly well for the next two or three years. Then tachycardia and nervousness again developed, and on admission to the hospital, exophthalmos, tremor, hyperhydrosis, and slight lid lag were noted. The basal metabolic rate was plus 80, and was little influenced by treatment; auricular fibrillation was noted; the nodules of thyroid tissue which were palpable were densely adherent in the tissues. For these reasons, X-ray treatment was recommended at least as preliminary treatment. Three treatments were given and the patient's condition is much improved, though the six months' interval is not sufficient to warrant a definite conclusion as to the outcome.

Mr. J. A. S., an insurance man 49 years of age, complained chiefly of extreme fatigue. Two and a half years before he had been operated upon elsewhere for hyperplastic goiter, and following operation had regained the weight he had lost, but had recurrent attacks of weakness, muscle soreness, and an uncomfortable sensation of heat in the skin. The physical examination was essentially negative, but the basal metabolic rate was minus 5, the blood calcium 6.1 mgsm. A diagnosis of postoperative parathyroid deficiency was made, and codliver oil, calcium lactate, and small doses of parathyroid substance prescribed, supplemented at times with heliotherapy. When treatment is discontinued, he has recurrence of the symptoms originally complained of, and at such times the blood calcium is invariably found to be low.

HAZARDS IN SURGERY OF TOXIC GOITER

T. E. DAVIDSON, M.D., Mason City

Hazards in surgery of toxic goiter and the disastrous sequelae that may follow operation can be greatly reduced by an early diagnosis, the careful administration of iodine, the early operation of tumors of the thyroid and an improved and careful operative technic.

A goiter patient demands skilled attention and any suspected case should be referred to the clinician or surgeon before an attempt is made to cure the patient by the indiscriminate use of iodine. Unfortunately, many cases of Graves disease have undergone iodine administration for weeks or months before reaching the surgeon and have passed the period of improvement during which operative measures should have been carried out. Iodine should never be given patients with simple adenomatous goiter because of the danger of setting up an iodine hyperthyroidism. Iodine should never be given to patients over twenty-one years of age with enlargement of the thyroid, because of the probable presence of small adenomata, unless for preoperative measures or under strict supervision. The preoperative administration of iodine to toxic adenoma patients along with rest, is essential, because of the occasional association of exophthalmic goiter and toxic adenoma. They seem to improve and stand the operation better, and an unsuspected crisis may be warded off.

Rest in bed for seven to ten days in a hospital is an important adjunct in the preoperative preparation of toxic goiter, even if the patient has previously been on Lugol's solution. Sometimes, due to the patient's economic condition, I am forced to treat him at home, but find hospitalization quicker, better and with less postoperative reaction.

The time for operation must be determined in each individual case. Those with symptoms of short duration can be prepared more easily and quickly than those of long standing. The cases of long standing are debilitated as a result of a recent crisis or from the visceral degenerative changes that have taken place. No major surgical procedure should be considered until the patient has at least partially regained his strength,

his weight has increased, and basal metabolism, pulse rate and blood pressure have decreased.

In borderline cases the test of surgery alone will tell how the circulation may react. If the reaction begins on the table it must be corrected and the patient returned to his room for further preparation. In some cases it is necessary to wait weeks and months before any major surgery can be done. In the bad risk patient, it is better to wait as long as there is any improvement.

In the rare cases of hyperthyroidism complicated by pregnancy, early operation is the treatment of choice; bearing in mind that it is better to save the mother and lose the child by abortion than to lose both.

Auricular fibrillation is a complication in some cases of toxic goiter of long standing. If there is no history of rheumatic heart disease and the physical signs of mild decompensation are present, it is safe to operate after a period of rest, with small doses of digitalis. During this time the rest will bring about improvement of the signs of decompensation, but the irregularity will persist. A majority of these cases will stop after operation or after the administration of quinidine following surgery. All valvular cases may be regarded with suspicion until the test of surgery shows the heart muscle to contain the reserve power essential to compensate for any ordinary disturbance of blood distribution.

All toxic goiter patients have more or less myocardial weakness and require most careful anesthesia. I have found the combined local (½ percent neocaine) and gas oxygen anesthesia to be the one of choice and the one used in most clinics. Under local anesthesia you can get the gland exposed, then follow with gas-oxygen while removing the gland and then allow the patient to wake up and strain to be sure there are no open veins or arteries left unligated, and hear the patient talk to determine whether the recurrent laryngeal nerve has been injured. Repeat the gas anesthesia while the second lobe is being lifted up and removed.

Every case of goiter should have an indirect laryngoscopy to determine if both vocal cords are functioning properly. One recurrent laryngeal nerve can be injured without any bad results, but injury to both would be faltal. If you stay within the posterior capsule and leave a very thin portion of the gland attached to it, you are not likely to injure either the recurrent laryngeal nerve or the parathyroids. Fowler and Hanson, in the dissection of 400 recurrent laryngeal nerves, found they were not tucked snugly away in the crevice between the rounding surface of the trachea and esophagus and well behind the capsule of the gland, but instead they found that in the region of the lower pole of the gland the recurrent laryngeal nerve lay from 1 to 2 centimeters lateral to the trachea. They found that the most intimate relation between the gland and nerve was not at the lower pole, as is generally assumed, but rather on the posterolateral surface at the junction of the middle and lower thirds; namely, at or just above the point where the chief branches of the inferior thyroid artery enter the gland. I believe if we stay away from the posterior capsule and the inferior thyroid artery and its branches, we run no risk of injuring the nerve. The secondary operation for recurrence is more difficult than the primary because the planes of cleavage have disappeared and adhesions distort the normal anatomy, so that in attempting to do a secondary subtotal thyroidectomy, it is not difficult to go through the posterior capsule and injure the nerve and parathyroids. To avoid any of these hazards, I am using X-ray therapy on these recurrences. Four to six treatments are given at intervals of three weeks and three areas exposed for five minutes each; one over each lobe and one over the thymic area.

The loss of voice two or three days following operation is due to swelling or frequently by too much rotation of the gland in exposing it for removal. Immediate loss of function of both cords brings about a condition of cyanosis, respiratory stridor and weak pulse which means that the recurrent laryngeal nerves are severed or clamped and the air passages must be opened up by tracheotomy. All forceps on the gland and ligatures should be examined in an attempt to locate the injured nerve. If it has been cut, an end to end anastamosis can be attempted, but never successfully. If it is caught in a forcep or ligature, these may be removed and the nerve will regenerate even though injured.

Other obstructions to breathing such as tracheal collapse and edema of the mucous membrane of the larynx and trachea may cause trouble as early as three hours and as late as forty-eight hours postoperatively and early tracheotomy is recommended.

Collapse of the trachea can be warded off in most instances of large adenomatous goiter by examining it to determine if softening of the cartilagenous rings has occurred. If so, suture the stump of the gland attached to the trachea to the sternohyoid and sternothyroid muscles. Most of these tracheal deformities can be suspected in large adenomatous goiters of long standing and can be seen by X-ray examination.

Tracheitis in greater or less degree is a very common postoperative complication; the more

gland left over the trachea, the less the irritation. The best treatment is steam inhalations with compound tincture of benzoin.

In removing the gland, the superior thyroid should be clamped as early as possible to prevent any more toxic substances entering the blood stream than necessary, thus lessening the postoperative reaction. Careful examination should be made of the gland for any anomalies that may exist, so that only enough gland is left to keep the body normal. In the hard, fibrous gland of long standing which is only mildly toxic, a greater portion can be left, due to a deposit of fibrous tissue as a result of thyroiditis, lessening the area of normal secreting gland. This can be determined by gross section and the grade of thyroiditis can best be determined by microscopic section which can be made and examined while you are getting ready to remove the opposite side. Radical removal of tissue in these cases will result in hypothyroidism and chronic invalidism. In the soft, vascular gland with greater toxicity, a thin layer of gland over the posterior capsule and trachea is sufficient for regeneration and normal function. Care should be taken to remove the pyramidal lobe or any portion of the gland over the trachea in front because of the possibility of regeneration. An ugly lump may develop within a year; which greatly concerns the patient and is difficult for the operator to explain.

Recurrent goiters can be prevented by having the thyroid saturated with iodine at the time of operation and kept saturated for ten to twelve weeks after operation and then giving sufficient iodine thereafter, in the form of iodized salt in cooking, to supply that need for normal function.

Hypothyroidism following thyroidectomy is of various grades. The mild type, in which the patient puts on a few extra pounds, is not important. In the more severe cases, in which a great deal of weight is put on and the patient becomes sluggish and mentally dull, three to four grains of thyroid extract a day is generally sufficient for control.

Postoperative hemorrhage occurs from the cut surface of the gland due to a slipped ligature, or from a vessel that has been clamped and not ligated which opens up when the patient returns to his room; following the nausea and vomiting that sometimes occur.

It is important to leave the operative field dry. Every large vessel divided should be transfixed with a ligature, and I find that by allowing the patient to cough or strain after coming out from under the gas anesthesia, before the wound is closed, one is more sure to find the bleeding points, and obviate the necessity of a secondary operation for hemostasis. When this does occur, however, it demands immediate attention. The patient should be transported to the operating room and the wound opened up, the clot expressed and the bleeder found and ligated. If the pressure of the clot is alarming, the wound had better be opened in the patient's room, the clot expressed and the hemorrhage controlled later if thought best.

The postoperative reaction, which is so well controlled today by the preoperative saturation of the gland with iodine, becomes alarming in some instances and may border on a crisis. This reaction is at its height the second day and by the third ordinarily it should begin to subside. The preoperative administration of hourly doses of ten minums each of Lugol's solution for six or eight doses, and its administration in tap water by proctoclysis following the operation, aids greatly in lessening the reaction. If it borders on a crisis, fluids should be forced by every conceivable means; glucose intravenously, nasal tube feedings, Lugol's solution 10 to 60 minums in 1000 c.c. normal saline solution given at the rate of 100 c.c. per hour by hypodermoclysis and by rectum, if tolerated in the form of proctoclysis. Morphine gr. ¼ is well tolerated and can be given every one to two hours if necessary.

Postoperative pulmonary infections are apt to occur in greatly debilitated patients. Practically all of these can be prevented by the prolongation of the period of preparation and a careful and short anesthesia. Ordinarily ten to fifteen minutes of gas anesthesia is all that is necessary. The insufficient aëration of the lungs during the operation brought about by the rough handling of tissues, pressure on the trachea and too great traction of the gland when rotating it up for removal, is a factor in pulmonary complications. The semi-reclining position postoperatively for two or three days allows free breathing and the patient can raise mucus and swallow more easily. Steam inhalations aid greatly in raising mucus and are a splendid adjunct in the treatment of postoperative pneumonia. Patients who are suffering from anoxemia, as evidenced by cyanosis, respiratory difficulty, and elevation of temperature, are greatly benefited when placed in an oxygen tent and given oxygen until the symptoms subside.

Tetany following thyroidectomy has been the subject of a great deal of study. The parathyroids, four in number, are situated posterior and lateral to the thyroid and receive their blood supply from the inferior thyroid artery. The technic of leaving as large a portion of the lateral capsule as possible prevents damage to most parathyroids. Trauma incident to operation may

inhibit their function temporarily, but very seldom to a sufficient degree to cause the manifestations of tetany.

The removal of a substernal toxic goiter has all the hazards of goiter surgery as well as running the risk of rupturing into the pleural cavity, the large vessels or thoracic duct, and the danger of mediastinal infection. The first step in the surgery of the substernal goiter is to free the upper pole of the gland, and then keeping inside the capsule and back of the tumor, the substernal portion is freed and delivered slowly and carefully. After it is elevated, a pack should be placed into the cavity, so if the patient coughs, hemorrhage will not occur or the pleura rupture. Any portion of the gland left in the cavity should be removed, as it is unvascularized and will predispose to mediastinitis, fluid, necrosis, and infection. If mediastinitis exists, drainage, irrigation, or anything else will not save the patient. A drain should be kept in the cavity two to three weeks to be sure the serum secreted by the raw surfaces does not accumulate and become infected.

I believe the public and the medical profession should be taught the danger of procrastination in cases of hyperthyroidism and bring these cases to operation earlier. Less time will be consumed by the patient in preparation and more early and complete cures will be effected.

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Discussion

Dr. F. B. Dorsey, Keokuk. The essayist is to be congratulated upon his interesting paper. There is no question but that iodine has been much abused in the management of thyroid cases. In a certain number of the diffuse, non-toxic thyroids, in patients whose age does not reach the early twenties, iodine has a beneficial effect; also in this type occurring during pregnancy. Iodine should be used in no other type of thyroid except as a preoperative and postoperative aid.

The indiscriminate use of iodine has made the diagnosis of the early borderline case much more difficult, because after the administration of iodine to these cases, some of the primary typical symptoms, enlarged thyroid, tachycardia, tremor, increased basal metabolic rate and exophthalmos, may be absent; but the history and the presence of some of the secondary symptoms, such as loss of weight, muscular weakness, especially noticeable in the quadriceps, sensation of increased body warmth, diminished or absent menstruation in the female, vasomotor instability, history of gastro-intestinal disorder without apparent cause, increased sweating; and of least value, the subjective nervous symptoms, may be emphasized.

Operative hazard in toxic thyroid is almost nil providing proper management occurs prior to, during, and following the operation.

The most frequent hazard is due to procrastination, or waiting until the toxic thyroid has permanently damaged the nervous and cardiovascular systems; for this there is little excuse. Besides the age of the goiter, the age of the patient is an important factor. At the two extremes of life the hazard is the greatest.

A very serious hazard which should be given much emphasis is the danger of malignancy appearing in the nodular goiter, whether it be toxic or non-toxic.

Hazards which worry the conscientious clinician are those toxic thyroid cases complicated with acute conditions, such as an acute abdomen, a bleeding uterine fibroid, diabetes, thyrotoxic insanity, pregnancy, or complicated cardiac decompensation.

In the thyrotoxic case with an acute abdomen we proceed as follows: if the patient is able to take Lugol's solution by mouth, we give it in large doses in fruit juice or milk, prior to operation. If it is inadvisable to give it by mouth, we give Lugol's solution 1 dr., corn syrup 1 oz. to the pint of n/s per rectum and give sodium iodide intravenously. We operate as soon as possible for the abdominal trouble and push the iodine postoperatively, as previously described, until the toxic symptoms subside, then when the patient has recovered from the abdominal condition, we do the subtotal thyroidectomy.

Some patients with abdominal conditions, who at the time of operation show little or no evidence of a toxic thyroid, but who develop an increased temperature after operation, and pulse out of proportion to the abdominal condition, will be greatly benefited by the administration of large doses of iodine, because often the abdominal condition aggravates the seemingly innocent goiter.

If goiter is associated with diabetes, and the patient does not respond well to insulin, the addition of Lugol's solution will make the patient more receptive to insulin. When the patient becomes sugar-free, partial thyroidectomy is indicated, after which the sugar tolerance will greatly increase.

Thyrotoxic insanity cases try the ingenuity of

the most experienced physician, but the most satisfactory procedure is to push the use of iodine by any and all routes, and give repeated blood transfusions. When the patient quiets down, subtotal thyroidectomy should be done.

Toxic thyroids occuring early in pregnancy which do not respond to non-operative management demand an early partial thyroidectomy. These patients seldom miscarry. If the same condition appears in the later months of pregnancy, however, and non-operative management fails, then a hurried Caesarian section is indicated, rather than to try to remove this highly vascularized gland and run the chance of producing premature labor. The toxic symptoms usually subside after the Caesarian section, and later partial thyroidectomy can be done with a greater degree of safety.

Edema is no contra-indication to partial thyroidectomy, providing rest, diet and the proper administration of Lugol's solution have had a thorough trial. Patients who have no casts in the urine are markedly benefited both as to edema and as to toxic thyroid, if given salyrgan in 2 c. c. doses intramuscularly every second or third day. If digitalis is used, it should be given in large doses until its full effect is realized, but it is not advisable to operate until four or five days after the last dose of digitalis.

Pulmonary complications are a hazard in any major operation and should be guarded against.

Embolism is also a hazard of surgery to be considered and careful technic helps to obviate the danger.

Technical hazards should now be almost nil in the hands of an experienced surgeon. Ethylene-oxygen anesthesia, without the use of local anesthesia, is the anesthetic of choice, especially in the more toxic cases,

The secrets of success in operation are first, to know the planes of cleavage, and to deliver the lobe well before further procedure. By transfixing the ligatures involving the larger vessels, we prevent slipping. After delivery of the lobe, if the vessels are carefully caught with hemostats before severing the gland, hemorrhage is avoided. You also know whether you have infringed on the recurrent laryngeal nerve, because pressure on the nerve immediately changes the character of the breathing and the hemostat can be released before damage is done. Even this is not necessary, however, if you stay within the capsule. If hemorrhage should occur after you have delivered the gland, it is easy to control it with your fingers, sponging and tying the vessel. Near either pole it is necessary to look out for those little yellow bodies, the parathyroids. It is well to know that the toxic substance of the thyroid may involve the nerve, as diphtheria toxins occasionally do. The same may be said regarding the parathyroids; in fact we had a toxic goiter patient who had tetany prior to operation and none after subtotal thyroidectomy.

If you find the tracheal rings softened as the result of an old mixed type of gland and suspect collapse of the trachea, it is best to do a partial lobectomy and a little later do the other lobe. This, however, is seldom indicated.

Tracheitis can be markedly lessened by not skinning too much of the gland off the trachea.

With regard to recurrent goiters, I will say that if we keep in mind that "it is not how much of the gland you remove, but how little you leave," there will be very few recurrent goiters. If recurrence does take place, we prefer to operate and know how little of the gland we are leaving, rather than gamble with X-ray or radium without knowing how much damage has been done the surrounding tissue. It is much more difficult to operate after X-ray and radium treatments have failed, than to do the secondary operation.

Dr. Davidson (closing). I thank Dr. Dorsey for his splendid discussion of the paper and for bringing out some of the important facts that I left out of my paper because I was afraid of the length of time and tiring you folks. However, I think that you have really had enough experience with iodine and with toxic goiter to know that the sooner those individuals are operated upon, the fewer hazards the surgeon is going to encounter in performing the operation.

So the reason for bringing this paper to you is to show you that the dangers can be lessened by the early operation and the careful use of iodine.

CHRONIC RENAL TUBERCULOSIS*

HERMAN L. KRETSCHMER, M.D., Chicago

The diagnosis of chronic renal tuberculosis may be one of the simplest and easiest to make, but it may also at times be one of the most difficult, necessitating every modern diagnostic aid.

The disparity as regards ease in arriving at a diagnosis depends, in a large measure, upon whether or not the individual case is an early or a late and far-advanced one. The early cases with but few symptoms, in which the tuberculous process is localized to one of the renal papillae without involvement of the renal pelvis, ureter or bladder, stand in great contrast to the advanced cases in which there is more or less bladder involvement, with bladder symptoms and changes in the urine. In this group, of not infrequent occurrence, it is possible to make a tentative diagnosis in a large percentage of the cases without resorting to special methods of investigation. But, even so, it is always necessary to verify the tentative diagnosis and to localize the tuberculous process by means of special diagnostic instruments.

In a large number of cases a tentative diagnosis of tuberculosis of the kidney or genital tract can be made from the history, a careful physical examination and repeated examinations of the urinary sediment for tubercle bacilli. From these data,

*Read at the meeting of the Peoria City Medical Society, Peoria, Illinois, September 2, 1930.

and with the thought in the examiner's mind of the possibility of renal tuberculosis, many more cases could be recognized at an earlier period, and surgical treatment could be instituted with much better functional results than is generally true today.

HISTORY

The importance of obtaining a careful history in any surgical condition cannot be too strongly stressed. In taking the history one may receive an impression, from statements made, which immediately focuses one's attention on the possibility that the patient may be suffering from a condition that is tuberculous in origin, and which may be the sequence, directly or indirectly, of an old tuberculosis of the lung or an old attack of pleurisy; or the patient may give a history of some previous operation for the cure of a tuberculous lesion. It can easily be elicited if the patient has had a pulmonary tuberculosis and spent some time in a sanitarium; on the other hand, repeated questioning is often necessary to refresh the patient's memory to the effect that many years ago he or she was treated for a chronic pleurisy or that during infancy and childhood scrofula or white swelling had occurred.

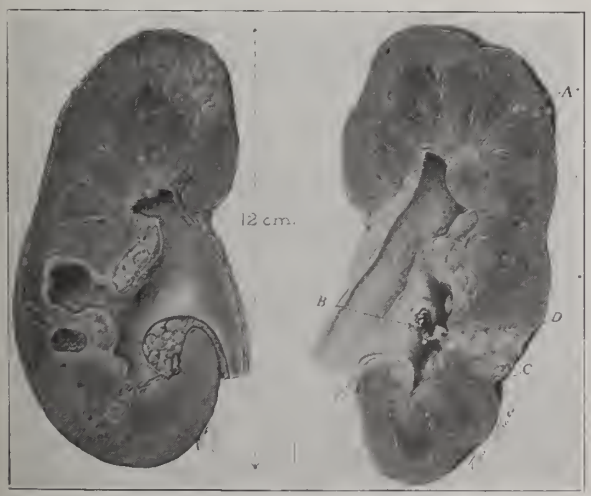


Fig. No. 1. Extensive involvement of upper pole. Large cavity in middle third extends almost to the surface.
Fig. No. 2. Small group of tubercles in the cortex (A). Wedge shaped area of tuberculosis extending from the papillae to the surface with scar and retraction on surface (C-D). Area of ulceration in pelvis (B).

In the same category we must place the history of previous operations, such as operations for tuberculosis of the bones and joints, as well as operations upon the genital tract in the male.

The history of the present complaint is of equal importance. By far the largest number of patients seek relief from a group of symptoms referable to the bladder, a group of symptoms that lead

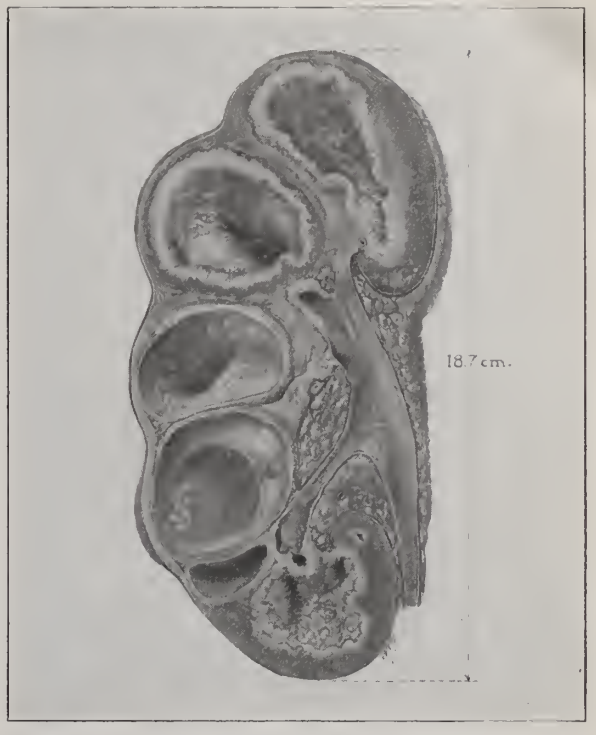


Fig. No. 3. Note increased size of kidney with extensive cavity formation. Only a small amount of renal tissue remains at each pole. Note absence of involvement of the ureter. Small group of tubercles in pelvis.

readily to a diagnosis of chronic cystitis. When the urinary examination shows the presence of pus, a diagnosis of chronic cystitis is made and the usual treatment is instituted. Naturally this treatment fails, and a new medicament is tried. With the failure to relieve the symptoms with drugs, every kind of bladder treatment is given without relief or result.

If it be borne in mind that chronic cystitis does not exist as a disease entity, we immediately remove one of the great pitfalls in making a correct or at least a tentative, diagnosis.

In order that a chronic cystitis may develop and persist, it is necessary that there be present some form of obstruction, such as a stricture of the urethra, or some lesion of the prostate, such as hypertrophy or carcinoma. A chronic cystitis may be due to a foreign body in the bladder, and in a small group, chronic cystitis may be due to disturbances in function caused by disease of the central nervous system.

By exclusion of the foregoing lesions, the possibility arises that the bladder symptoms may be due to a chronic lesion of the kidney, and when it is remembered that the largest number of patients with chronic renal tuberculosis present bladder symptoms, the statements already made have a deep significance.



Fig. No. 4. Cystogram, showing bilateral disease.

FREQUENCY

In a recent study of 221 patients with renal tuberculosis, 184, or 83.2 per cent, complained of frequency of urination during the day.[1 & 2] Furthermore, in this series there were 166 who also had frequency of urination at night. It should be borne in mind that nocturia in young adults is most frequently due to three conditions: namely, renal tuberculosis, chronic nephritis and diabetes. Therefore, nocturia in a young adult should at once focus one's attention on the possibility of a renal tuberculosis. Chronic nephritis and diabetes can readily be differentiated from renal tuberculosis.

HEMATURIA

Often in going over the history, the fact can be elicited that the patient has passed bloody urine. Gross bleeding occurs less often than frequency of urination, but when it is present it is of great importance. Not infrequently the young adult who has had an attack of painless and symptomless hematuria, has an early renal tuberculosis. The bleeding is due to an ulceration of one of the renal papillae, resulting in erosion of the small papillary artery with profuse and, of course, painless hematuria.

Bleeding associated with bladder symptoms is more usual than symptomless bleeding and may be due to the ulcerations in the bladder. Tuberculosis of the urinary tract is one of the five common causes of hematuria. That this is relatively frequent is evidenced by the fact that hematuria was present in 107 out of 221 cases.

PYURIA

In a third group of cases the patients come in because of the presence of pus in the urine. They may be subscribers to a laboratory service which examines urine at regular periods and reports back to the patient that pus has been found in the urine. At times the patient will note that his urine is turbid and at once assumes this to be due to pus, or he has been told by his medical adviser that his urine contains pus.

Besides the foregoing points elicited in the history, information is often obtained with regard to members of the family who are ill or who have died of tuberculosis; or a history of hemoptysis occurring a number of years previous, with or without night sweats, loss of weight and other points that unmistakably point to the possibility of a tuberculous lesion in the genito-urinary tract.

DEMONSTRATION OF TUBERCLE BACILLI IN THE URINE

The idea has been advanced that the demonstration of tubercle bacilli in the urine is a difficult task and that an elaborate technic is neces-



Fig No. 5. Showing the area of calcification and a filling defect.

1. New England Journal of Medicine, Vol. 202, No. XIV, pp. 660-672, April 3, 1930.
2. The American Journal of Surgery, Vol. 1X, p. 221, August, 1930.

sary. Such is not the case. Great care must be exercised, of course, to exclude smegma bacilli, and this can be done by the catheter in the female and a thorough cleansing of the glans penis in the male. Stained sediment examination may be fortified by the guinea pig. A combination of both smears of sediment and guinea pig inoculations resulted in demonstrating tubercle bacilli in 87.7 per cent of our cases. This included bladder and ureter catheter specimens. Not infrequently patients come to the urologist at the suggestion of their family doctor, who has found tubercle bacilli in the voided urine. In these instances the evidence should be evaluated in a most careful manner, since the fact remains that a routine smear for tubercle bacilli in a suspicious case often results in a positive slide.



Fig. No. 6. Tuberculous involvement of superior, middle and inferior calyces as well as the ureter.

PHYSICAL EXAMINATION

Next in order is the physical examination and this often gives confirmatory evidence of the presence of tuberculosis, either healed or active, in other parts of the body. The presence of scars in the neck, the result of surgical treatment of tuberculous glands, can be noted. Careful physical examination of the chest should be carried out, followed by a roentgen-ray examination. In 180 cases of renal tuberculosis there was evidence of active or healed tuberculosis of the lungs in 35.5 per cent.

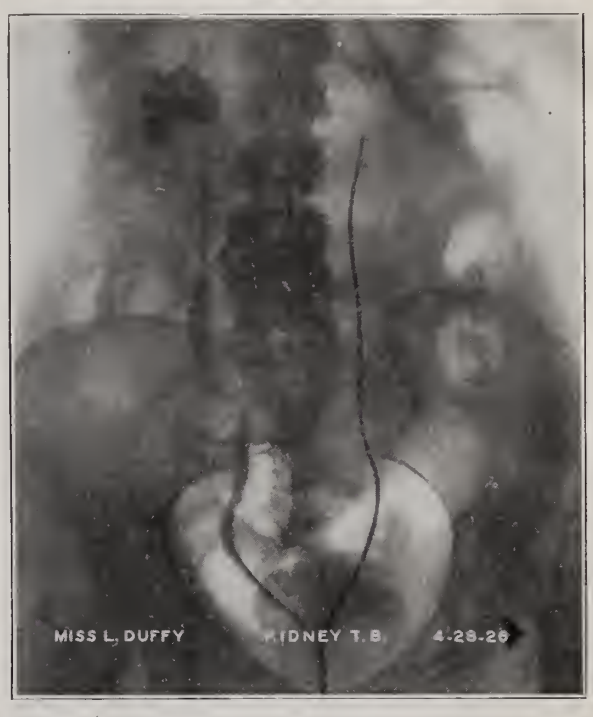


Fig. No. 7. Showing a tuberculous stricture of the ureter with dilatation. Tuberculosis in superior pole.

The physical examination, furthermore, reveals the presence of scars, the result of an old tuberculous disease of the bones and joints, as well as evidences of an old tuberculous tenosynovitis.

Tuberculosis in the genital tract of the male can readily be established by palpation of the epididymi for the presence of nodules. Palpation of the vas deferens may give additional evidence.

The rectal examination should never be omitted, since it often shows involvement of the prostate or vesicles, or both. If the rectal examination is positive, additional information is obtained. When the examination is negative, the possibility that a small lesion is present but cannot be detected, must always be borne in mind.

In 123 males suffering from renal tuberculosis, 39 had involvement of the prostate and vesicles, and in 26 there was also involvement of the epididymis. In addition, 14 had had a castration, 7 an epididymectomy, and one a double castration; all of which illustrates the importance of getting as much confirmatory evidence as possible.

THE SPECIAL EXAMINATION

From the foregoing data enough evidence has been derived to warrant a tentative diagnosis of the presence of tuberculosis of the genito-urinary tract. At this point the use of special diagnostic instruments is indicated for the purpose of localizing the tuberculous lesion in the urinary tract.

A routine roentgen-ray examination should be

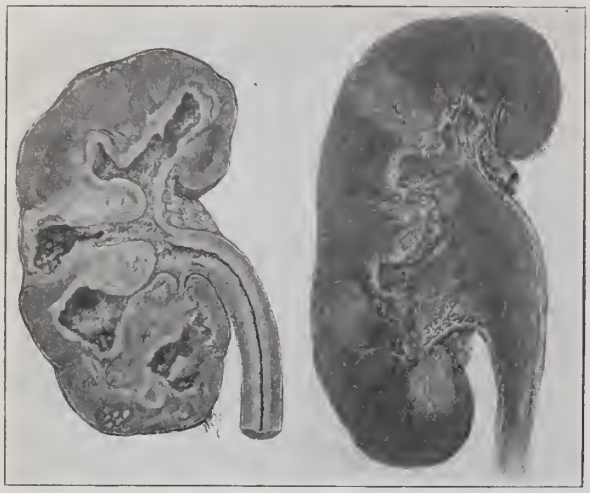


Fig. No. 8. Showing enormous thickening of ureter with great narrowing of lumen of ureter.
Fig. No. 9. Extensive involvement of the renal papillae, pelvis and ureter with involvement of the parenchyma.

done as the next logical step, first in order to exclude a stone and second to demonstrate areas of calcification, should they be present. This may then be followed by an intravenous pyelogram with uroselectan. Cystoscopic examination and ureteral catheterization are next carried out. The cystoscopic examination is done for the purpose of examining the bladder so as to determine whether or not it is involved, and to what extent. The ureteral catheterization is done to determine which kidney is involved, the degree of involvement, the presence of a second kidney, its functional capacity, and whether or not it is free of tuberculosis. If required, a pyelogram can be made at the same time.



Fig. No. 10. Showing extensive calcification of kidney with complete closure of ureter.

As is well known, early in the course of the disease the process is unilateral, while later, bilateral involvement is common. Nevertheless, an increasing experience and a more careful and accurate study of these cases demonstrates that bilateral cases are definitely on the increase. Formerly, it was my impression that bilateral cases were rare. A recent review of a series of 221 cases showed 41, or 19.3 per cent of them, to have bilateral involvement, a fact of great significance when contemplating nephrectomy. Since the wisdom of performing a nephrectomy in bilateral involvement is open to question, surgery should be



Fig. No. 11. Autopsy specimen, showing disparity in the size of the two diseased kidneys with extensive amyloid degeneration of the larger kidney.

instituted in these instances only when there is severe secondary infection, with chills and fever; that is, when the patient is suffering from an acute septic condition. Seldom is hemorrhage so severe that a nephrectomy is necessary. When the renal tuberculosis is associated with stone, nephrectomy may be called for to relieve pain due to renal colic, but this, too, is of rare occurrence.

Once the diagnosis has been established and the opposite side has been ascertained to be normal, nephrectomy is indicated. However, there is a small group of cases, in which nephrectomy may be deferred, and they are the cases in which there may be an element of doubt or where the lesion is obviously small.

In the group of doubtful cases there are those in which the routine examination may show only one or two acid-fast organisms without pus; others in which the urine is clear and only a few organ-

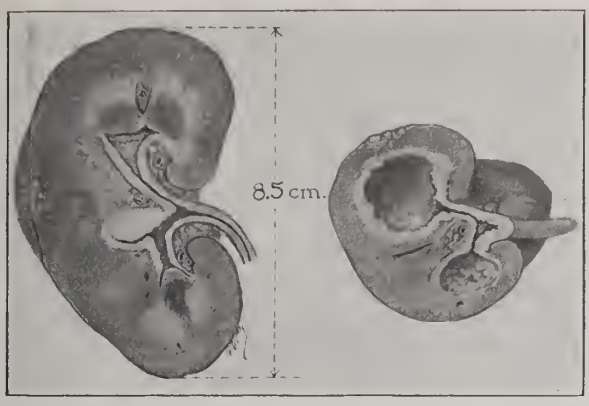


Fig. No. 12. Autopsy Specimen. Bilateral renal tuberculosis. Note great thickening of ureter with small amount of kidney

isms have been found after a prolonged and careful search, and where the pyelogram is normal; and others still with a normal bladder where the pyelogram shows only a very small lesion of one of the papillae.

A number of authorities are of the opinion that the mortality is much higher in early cases, this being due to the fact that the patient has not had time to develop an immunity. One thing is certain: early cases are rarely cases of emergency; hence they can be kept under observation without any hazard to the patient.

MEDICAL ECONOMICS*

EZRA L. WURTZER, M.D., Clear Lake

It is impossible to discuss such a broad subject as medical economics in a short paper, so the subtopic of Fees, Collections and Credits has been chosen.

We know that the people of the entire nation are deeply interested in the cost of medical care, and I feel that it is our duty as a profession, and as individual practitioners, to entertain the business side of medical practice in our society functions and in our daily work among our patients, for it is our problem to control medical practice and its destiny insofar as it is humanly possible. If we shirk this responsibility we will allow capital or industry to commercialize our art and science, with the possibility that the scientific standards of medicine will be lowered, and its progress retarded. State medicine is likewise a menace to scientific advancement because of political complications, and should it come to pass we would likely find ourselves so deeply involved in politics, that there would be little time left for study and practice.

The word "fee" is defined as a reward or a thank-offering and its use was instituted at a time when the art of medicine was vested in the clergy, and the practice of medicine was somewhat mythical and spiritual. When the art and practice of medicine did become a separate institution the fee with its original meaning was still adequate for the professional worker of that time. Now we find a different situation, due to the progress of industry and finance, and the word becomes more monetary in connotation, but the original meaning is still used to the advantage of those who tolerate loose methods in their business dealings with doctors. Such a hit-and-miss transaction is far below the standards of a business-minded nation.

There is considerable feeling among members of our profession relative to the inequality of fees obtained by the general practitioner and the specialist, and as yet there has been no effort made by organized medicine to analyze this situation. The public is aware that such a condition exists, and regards it as a duty to stabilize medical fees by semi-socialist methods. The members of our profession also sense this condition and some of them try to equalize matters by "splitting fees," not entirely because they are racketeers, but because of economic stress.

The newspapers and magazines often contain lengthy articles on the subject of "fee-splitting," condemning traffic in sick people as immoral and degrading, which in a sense it is, but we are not without honor or reason, and if there exists such a malicious traffic, it is practiced by a very small minority of men in our profession.

It has been said that we shroud our work in false philanthropy and in misplaced charity, which breeds contention among the members of our profession, and gives the layman a chance to play us for "suckers," if he so chooses. The remedy for this condition lies wholly within our own organization, and we should make every effort, individually and collectively, to educate the public in the business principles involved in the practice of medicine. I cannot help but feel that some of the disrespect and disregard that some of the people have for the medical profession is due in part to the apparent strife within our ranks, and in part to our slothful methods of business dealings with the public.

The individual doctor has a wonderful opportunity to render a real service to the profession by giving more time and thought to medical economics in his professional contacts with people. A discussion of economics between doctor and patient should be just as frank and just as friendly as a discussion of medical matters would be. An estimation of the cost of diagnoses and treatment,

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when possible, will often mean the difference between being paid for his work, or being beaten out of his fee. Such a conversation between doctor and patient does two things—first, it helps the patient to see the fairness of the proposition, and second, it means easier collections and more money for the doctor. Such a procedure might be made still more profitable if all the important points of such a business conversation were recorded with the patient's medical history and findings, and then it would not be long before the physician would have established his own credit bureau. This would be termed good business. Most patients would appreciate such a frank and friendly discussion of the matter, and any misunderstanding could be prevented. On the other hand, there will always be a few patients who will immediately resent such a topic of conversation. Such an attitude should put us on our guard, because the patient is either disrespectful or a real deadbeat.

Doctors are timid about launching a business conversation, because they are not business men. In all of our study, in all of our training, and in a large part of our practical lives, we have learned nothing about business methods and their relation to the practice of medicine.

The majority of medical practitioners are not wealthy, but must depend upon income from their practice. Very few are wealthy after spending their lifetime in practice. We have no "Old Doctor's Home" to shelter us when age overtakes us, yet we fail to conduct our affairs in a business-like manner, and trust to luck and Kind Providence for a happy ending.

The laity is apt to lay all the high cost of medical care at the feet of the doctor, and in their minds he is to blame; whereas the fact of the matter is, the doctors' fees represent only a small percentage of this cost. The lay attitude toward the business of medicine is governed by stale tradition, simply because they have had no education in the matter. This is our task—a duty which we should realize and practice.

A doctor should have more of the money he earns, not for the money's sake, but for the good of himself, his family and his patients. More money for the doctors means that they can afford rest and recreation periods, that they can have more time for study and post graduate work, both of which better enable them to serve the sick, and both of which serve to advance the art and science of medicine. To believe that money has no place in our profession is sheer ignorance and dumb philosophy. Industry and insurance have proved that medicine has a distinct economic value and they are using this knowledge for their own financial gain. Still we are hesitant about adopting the principles of medical economics for fear of adverse criticism from a few who have not given the subject proper investigation, or from those who wish to keep us down and take away that which is rightfully ours.

Considering that we have four classes of patients, each with different paying habits, let us analyze each class briefly.

First, we have the poor patient, honest and worthy, but always broke. The counties and the state have funds, derived from taxation, to pay for their medical care, so they need not worry us. Second, we have the large middle-class, also known as the "white-collar class" who are neither rich nor poor, but honest. They would pay if they knew how to manage their affairs, but they are actually worse than broke. They buy almost everything on a partial payment plan, and often find that their obligations amount to more than their incomes. Some of these people, somewhat more thrifty than the average, budget their incomes and expenditures, but because of superstition or neglect, they never provide for doctors, nurses or hospitals in case of accident or illness. This class is sorely in need of educational service such as only the medical profession can give. Third, we have the wealthy class. They are wealthy because they are good business men, and because they are good business men they naturally detest the fee system. For a rich man to pay for a poor man's service is not his way of practicing charity. Gifts on their part are matters for publicity, from which they often hope to receive social or financial gain, and present-day custom does not provide for this in the medical fee system.

The fourth class is the deadbeat, the man who makes it a business to get all he possibly can for nothing. He is apt to be imposing in his dealings with everyone, but more especially with the doctor. Such people demand attention—they insist on the best hospital service, and all this time they fully intend to beat their bill, or else never realize that they cannot pay it. They believe, or at least try to make others believe, that the world and its social order owes them a living, and that doctors and nurses are in duty bound to care for them when ill. They will not accept county aid nor charity because of false pride, yet their morals are so low that they feel proud when they beat the doctor, nurse and hospital out of their just dues, and they are very quick to instigate malpractice suits, and counterclaims in collection suits. Here is an opportunity for the profession to do some real work, and if the deadbeat class, or a part of it, can be brought to the mark, most of our troubles will be over.

If the doctor kept a record of the paying habits

of his patients and if each County Society maintained a file for duplicates of such records, and the State Society kept a master file, we would have an air-tight information bureau of real value to the profession. Such a system would stabilize credits, collections would be more satisfactory, a fee schedule could be more fairly adjusted, and eventually medical fees might be lowered without loss to the profession. This may sound idealistic in the extreme; nevertheless, any attempt to reach such an ideal would be a start in the right direction.

The collection of medical accounts differs somewhat from that of other accounts, in that we have for sale no material commodity which might later be recalled, and because our services are rendered at a time when the financial status of the average patient is waning. If accident or illness is covered by insurance, the insurance company is apt to limit our fee, so we can readily realize the difficulties that might be encountered should we allow commercial agencies to handle the business of medical practice.

In closing, let me remind you that I am not in favor of commercializing medical practice by members of the profession, or by industry. Neither do I advocate mercenary methods at the expense of high ideals and honesty. But I do believe that we can save the art and science of medicine from being reduced to the level of a trade, or from being controlled by state or industry, and we can render better service to suffering humanity, if we conduct our affairs somewhat in accord with the prevailing financial customs of the day.

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NEWER METHODS IN CATARACT SURGERY*

WALTER STEVENSON, M.D., F.A.C.S.,
Quincy, Illinois

The operation for removal of cataract is the most important, most serious and most frequently done in the whole range of ocular surgery. Its success or failure means much to the patient. In the one case, sight is restored and the happy patient goes about his business as usual; in the other, vision is lost and an unfortunate individual becomes a helpless burden to family or state.

If the ideal and simplified type of operation for removal of cataract had thus far been devised there could be no excuse for this essay. However, because there exist so many opinions as to technic employed, and, also because in recent years there has developed a sharp controversy between the exponents of two recognized methods, I have felt it quite apropos to contrast the merits of each type. It is, therefore the purpose of this paper to point out the methods that promote successful results.

The object of any cataract operation is the immediate removal of the lens from the eye as completely as possible. As usually done it consists of five steps.

1. The making of a section in the upper half of the cornea with a Graefe or other suitable knife, of sufficient size to allow the passage of the cataract.

2. Iridectomy. This implies the excision of a small piece of the iris and may be a complete section of the upper part of the iris extending through the pupillary margin or may be a small hole nicked through a portion of the iris, when it is known as a peripheral iridectomy. This step is not desirable, but is essential. The operation may be done without this procedure, but iris prolapse is then to be anticipated.

3. Capsulotomy. That is, opening the anterior capsule of the lens in order to allow the lens to escape from it.

4. Expulsion of the lens by pressure exerted on the eye.

5. Toilet of the wound, i.e., the removal of particles of soft lens matter from the anterior chamber, freeing the lips of the wound from blood and tags of capsule and replacement of the iris.

These, then, are the steps employed in the type of operation which has been used for many years and which, by the way, is the operation usually done by most ophthalmologists today, even though it is now generally spoken of as the "old type." Now just how does this operation fall short of being ideal? It is a recognized fact that, done as described, it yields a successful end result in the vast majority of cases. The one defect of the operation is that it does not accomplish that which is desired, i.e., the removal of the entire lens; for the capsule remains. For many years ophthalmologists have agreed that if the lens could be removed with its capsule intact, with no greater danger than would be incurred if the capsule is left behind, we would then have the ideal cataract operation. Why? Because to open the capsule

*Read before the Lee County Medical Society, Fort Madison, December 18, 1930.

and force the lens from its envelope presupposes that there will be left behind remnants of lens substance. Retained lens cortical substance does act as an irritant sufficient to delay healing and in a great many cases causes an iritis, with resulting adhesions and possible closure of the pupil, glaucoma, etc. More than this, even in those cases which heal kindly, the retained posterior capsule takes on proliferation of cellular tissue which in many instances causes a secondary opacity equal to the original. This secondary cataract, or after-cataract, requires a second operation known as needling or discission before the patient can be discharged. Patients who come for cataract operation are usually well advanced in years, their judgment is warped, and a needling, while a minor procedure to the surgeon, is to them just another operation. When the first operation is over and the bandage removed they expect to see immediately and not have to undergo another operation.

What are the objections to removing the lens within its capsule? There can be but two; when the posterior capsule is removed there remains nothing to prevent prolapse of vitreous except the delicate hyaloid membrane; and second, any type of intracapsular operation is more difficult to do. There can be no valid reason for the second objection. It is true that in an intracapsular operation which requires pressure on the eye to expel the lens, a great deal of experience and dexterity is essential to prevent prolapse of vitreous. Just the proper degree of pressure must be exerted, at the proper point, and at the right moment, and experience alone will enable one to know when to release this pressure.

An operation known as the Indian Operation for intracapsular extraction devised by Lieut.-Col. Henry Smith, formerly of the British India Medical Service, has been in use by him and his followers for many years. The operation has fallen into disrepute because of the dangers heretofore mentioned. Smith literally forces the lens in its entirety from the eye by sheer pressure on the globe. As early as 1895 Smith practiced this operation in Jullunder City, India. He is not only an unusual man, but a great general surgeon who performs every type of operation and who, in the course of his service has done several thousand cataract operations, in addition to his other general work. His reported results have been most excellent; however, conditions in India differ from those in more civilized countries, and followers of Smith, and even Smith himself have not been able to duplicate these results outside of India. The fact is, that the so-called Indian operation is complicated in a number of instances, too many in fact, by vitreous loss. Vitreous loss is a serious accident, because vitreous does not regenerate and is followed invariably by large opacities in the resultant media. Too great loss means loss of the globe from shrinking. Small vitreous losses do not usually impair the end result, but nevertheless the accident is serious enough to unnerve the average operator and should be avoided.

How then can we remove a cataract within its capsule with the minimum danger of vitreous loss or at least a minimum comparable to the old type of operation? The answer is, by extracting the lens rather than by expressing it. Recently, in an endeavor to remove the lens with its capsule intact, Arnold Knapp devised a special capsule forceps, which is supposed to grasp the anterior capsule but not rupture it. By a rocking motion the lens is thus dislocated from its zonular attachment and the cataract either lifted from the eye with the forceps or expressed by slight pressure. In the hands of Knapp this seems an ideal method and he has reported hundreds of excellent results. Other operators have not been able to use this forceps with the same dexterity and skill as does Knapp; therefore, with an average operator the method resolves itself into a capsulotomy type of operation, since in many cases the anterior capsule comes away before the cataract.

In 1910 Vard Hulen of San Francisco advocated the removal of an intact cataract by attaching to its anterior surface a suction cup apparatus, after which the cataract was gently lifted from the eye. His apparatus consisted of a large glass demijohn from which the air was exhausted by an ordinary hand pump; this furnished the vacuum which was connected to the suction cup by a rubber tube. He reported excellent results. About the same time, Professor Barraquer of Barcelona, Spain, conceived the idea that if he attach a leech to a cataract he could remove the lens in its capsule. This he actually did in one instance. Following this he devised a machine which created a vacuum by an electrically driven pump. The Barraquer Pump is a very specialized piece of machinery, so constructed that when the vacuum is complete there is delivered a very slight alternating recession of the vacuum, the thought being that this slight throbbing would break the delicate attachment of the periphery of the lens in the zonule of Zinn. In practice it has been found that this alternation of vacuum is unnecessary. The machine I have to show you here is one of Barraquer's machines as modified by Green of San Francsico; it is manufactured by Mueller and Company of Chicago, is more rugged than the earlier machine, and although it delivers a

straight vacuum, we consider it a superior instrument.

It goes without saying that indications for operation, preoperative care, details of operative technic, postoperative care, etc., are all essentials in the description of any surgical procedure. It is therefore well to state when a cataract operation is indicated. Personally, I feel that a cataract should be removed as soon as it interferes with useful central or peripheral vision, regardless of the condition of the other eye; provided of course, that it can be done safely and with reasonable assurance of successful outcome. It is hazardous enough to go about in these days of heavy traffic with two eyes, and even though the patient has one normal eye, it is very advantageous to have the benefit of good peripheral vision in the other, since at times one cannot successfully obtain good central vision with a glass, due to confusion of images. The eye should be free from inflammation or evidences of old inflammation. There should be good light perception and projection and the pupil should react well to light. Study of the eye with a slit-lamp is an excellent preoperative caution. The patient should have the benefit of a complete general physical examination and should have a reasonably fair bill of health. Cultures taken from the eye should be made before operation and if more than a few colonies of bacteria are grown in twenty-four hours, operation should be deferred. The lacrimal apparatus should be functioning well and free from infection. Diabetic patients may be safely operated upon but the urine should be sugar-free and the blood sugar not too high. Foci of infection should be carefully searched for, particularly in the teeth.

The patient should be assured that operation offers a good chance of vision and every effort made to inspire confidence. He should feel that he wants the operation done and should not be talked into having it done. A patient fully confident that he will experience no pain and that he can rely on the judgment and ability of his surgeon will invariably act well at time of operation.

One of the outstanding contributions to the operation has been the development of akinesia, or paralysis of the lid muscles, by injection of their nerve supply with novocain. Van Lint makes injections at the outer canthus and then into the lids, but we favor the method of O'Brien, of Iowa City, who injects the seventh nerve as it emerges from the parotid gland. This is easily and quickly done over the condyle of the mandible; a few minutes after injection at this point with novocain, the patient is unable to close the eye on that side. The lids and brow should be painted with one-third strength iodine solution. We shave the eyebrow and clip the lashes. Starting twenty-four hours before operation; (and we put the patient in the hospital that much before time of operation), 25 per cent argyrol is instilled into the eye every four hours. Local anesthesia is induced with 5 per cent solution cocain, instilled at three minute intervals, four times. We do not inject conjunctivally. Many operators do this, claiming that instillations do not anesthetize the iris; complete anesthesia of the iris is induced if cocain is instilled into the eye after the corneal section by slightly raising the edge of the wound. Mellinger's speculum is used and remains throughout the operation. Just before the corneal section is made we place a corneal-conjunctival stitch, preferably the one recently developed by Higgins of Milwaukee. In passing, let me say that a suture of some sort is one of the outstanding developments of cataract surgery and is now used by most operators. Just because the average corneal wound will heal without suture does not argue against it. A bold, large section of the cornea is the very best preventive of complications and should include about one-half of the cornea. A small conjunctival flap is desirable and promotes healing through the increased blood supply furnished by it.

Following the section a small button-hole peripheral iridectomy is made, because it is well to have a thoroughly dilated pupil before the operation is begun, and 5 per cent euphthalmin is instilled several times about an hour before operation. After the iridectomy, the cup of the suction apparatus is accurately placed on the lens, slightly below the center, and free of the iris edge. The cornea should be lifted before placing the erisiphake, as it can be placed more accurately. The assistant is now notified by an agreed signal and with the pump running fully, he places his foot firmly on the cutoff switch. At this point one sees the lens jump forward and fit itself into the cup; when the vacuum registers the proper degree of millimeters of vacuum the erisiphake or suction cup is rocked gently to dislocate the lens after which it is gently lifted from the eye. Occasionally gentle counter pressure is necessary to deliver the lens and now and then it is necessary to lift the iris over the edge of the lens. The operator holds in his left hand a small forceps with which he has lifted the cornea by means of the suture; after the lens has become engaged he drops this suture and takes hold of the other or conjunctival end of the suture, ready to close the wound at once as the cataract emerges from the eye. Following this, atropine ointment is squeezed into the conjunctival sac and the eye closed immediately. Usually no toilet of the wound is necessary, as the

iris seldom prolapses. The patient is returned to bed and is permitted to be in a half reclining posture and may turn about as desired. Both eyes are bandaged for twenty-four hours, at the end of which time the unoperated eye is opened and remains so; the operated eye is gently inspected at this time and atropine used every day thereafter.

Patients are permitted to sit in a chair after twenty-four hours and have a full diet at this time, soft food being given the first day. Pain may be controlled with one of the barbituric preparations, although it is seldom experienced. I usually give two allonal tablets the night before operation and two tablets an hour before operation. It is surprising how kindly these wounds heal; usually there is not even conjunctival redness, and since we have adopted the above method not one case of iritis has developed. Patients are permitted to leave the hospital at the end of a week and we have had a number of cases leave several days prior to such a period. Glasses can be fitted in a week or ten days in favorable cases.

I have adopted this method of operation because of an utter dissatisfaction with the capsulotomy type of operation. Postoperative iritis and iridocyclitis, glaucoma, block pupil, delayed healing, prolonged convalescence, pain and whatnot, had about brought me to the point of refusing to do this type of work. We are now agreeably contented, which of course means that our patients are. The question may be raised as to why more oculists have not adopted this surgical procedure, because it cannot be denied that the method has been advanced for several years. To my mind there can be but two answers; first, there seems to be in the mind of the average operator a feeling that the operation is too highly technical and that there is a very real danger of vitreous prolapse. In answer to the first objection I would say that the operation does require great dexterity; meticulous attention to all of the details described, and that exceptional gentleness must be used in manipulations about the opened eye. The danger of vitreous prolapse is more apparent than real. We have had fewer losses than in the older type of operation, no doubt due to the fact that the eye is not touched until complete akinesis has been induced. In more than sixty extractions with this method we have had but one prolapse of normal vitreous.

There are so many advantages that they far overshadow the objections. The convalescence is very materially shortened. With a suture one feels secure after the eye has been closed; there is rarely a secondary iritis and never a secondary cataract. There is material improvement in visual end results; there is a better cosmetic result because of the deep black pupil, and if peripheral iridectomy is chosen a round pupil results, with reactionary reflex. This operation may be done long before the lens is fully mature or ripe. As you know, heretofore patients have been told operation must be deferred until the cataract is ripe. This spells blindness to the patient; to be able to remove the cataract before blindness occurs is a distinct advantage. The operation should not be done under fifty years of age, since the normal nucleus is small enough to be sucked through the erisiphake. Less vacuum should be used with the younger patient for this reason. Due to the contact of the erisiphake with the posterior surface of the cornea, there is present after twenty-four hours a dense opacity of the cornea because of the intolerance of Descemet's membrane to foreign bodies. This impairs immediate end results, but by the time a dressing is left off the opacity has cleared.

Otis Wolfe of Marshalltown, has been a pioneer in the introduction of this method of cataract extraction. His work has been a great inspiration.

I strongly urge anyone doing a moderate number of cataract extractions to give the method an unbiased trial. The results will be surprising and most gratifying. I cannot conceive of any operation with successful end results which gives a more satisfying feeling to both patient and physician. We have been doing this type of operation for the past two years and would not go back to the old method. Most of these patients are in the twilight of their lives, and are entitled to that procedure which promises most for them. If we can remove the obstruction to what they all consider their most priceless possession, we have performed a most gratifying duty and have accomplished the ultimate in surgical procedures.

POLIOMYELITIS IN IOWA IN 1930

HOWARD A. LANPHER, M.D., Des Moines
Director
Division of Preventable Diseases
Iowa State Department of Health

In keeping with the experience of other states Iowa suffered in 1930 a considerable increase in the number of cases of poliomyelitis over what may be considered the "normal" or "expected" number. Table I will show the number of cases reported by months for the last seven years.

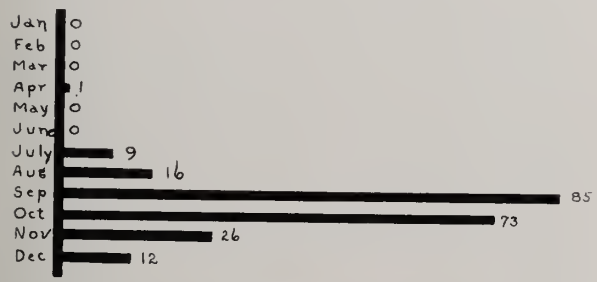
TABLE I

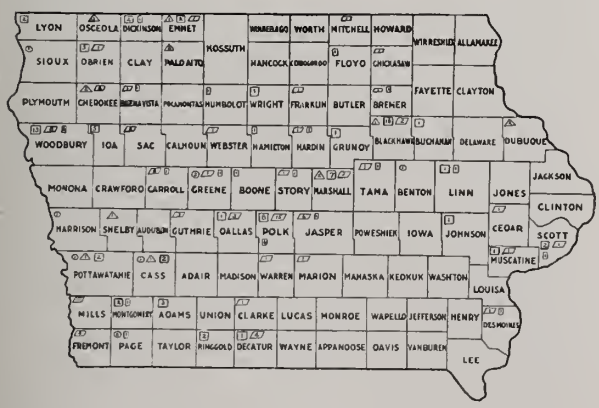
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1924	1	0	1	2	1	0	0	3	39	8	6	4	65
1925	0	0	0	2	1	0	8	24	61	59	16	5	176
1926	0	3	0	0	1	3	0	2	8	1	1	0	19
1927	2	1	0	0	1	0	1	9	28	36	17	14	109
1928	6	0	0	0	0	0	2	8	11	4	5	1	37
1929	2	2	1	5	1	4	1	4	17	26	8	5	76
1930	0	0	0	1	0	0	9	16	85	73	26	12	222
Total	11	6	2	10	5	7	21	66	249	207	79	41	704
Average	2	1	0	1	1	1	3	9	35	30	11	6	101

The seasonal variation of the incidence of poliomyelitis is shown definitely in this table and in Chart I, the months of September, October and November being those in which there is the greatest incidence.

Chart I shows the proportionate number of cases occurring each month in 1930.

CHART I





○ Number in July
△ Number in August
□ Number in September
▱ Number in October
▯ Number in November

Two hundred nine cases were reported from 57 counties in Iowa from July 1 to December 1. (See map). Twelve cases were reported in December, making a total of 222 cases for the year. This is 46 cases more than have been reported at any time since 1924. Case records were sent to physicians who reported cases with the request that the data be entered and the records returned. One hundred seventy-eight such records were returned, furnishing information on about 85 per cent of the cases.

Analysis of the data given on these records affords some interesting information. Table II gives the age and sex incidence.

TABLE II

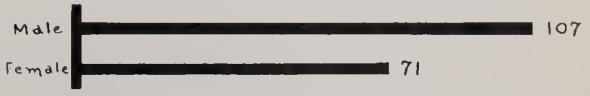
Age and Sex Distribution of 178 Cases of Poliomyelitis

Age	Male	Female
–1	2	2
1	4	3
2	6	8
3	5	4
4	5	6
5	6	3
6	10	2
7	4	5
8	13	4
9	4	6
10–14	26	9
15–19	12	11
20–24	4	5
25–29	3	0
30-39	0	2
40–49	0	0
50–59	0	0
60 plus	0	0
Age not given	3	1
Total	107	71

From this table it will be seen that 60 per cent of those attacked were males and 40 per cent females. This approximates the finding of Caverly in Vermont in 1917. The number of cases in his series (171) allows favorable comparison with the 178 of the present series. His figures were, male 54.3 per cent, female 45.7 per cent.

CHART II

Incidence of the disease by sex—1930



The figures for the age incidence in the present outbreak, however, differ markedly. Caverly* found that 54.9 per cent of his cases were in children four years of age or under, while in this outbreak only 25 per cent were in that age group. Caverly's percentage in the age group five to nine was 27.5, while the present series gives a percentage of 30. In the age group ten to nineteen the Vermont percentage was 13, while in Iowa it was 32.6. The age group twenty to twenty-nine in Vermont showed a percentage of 2.9 and in

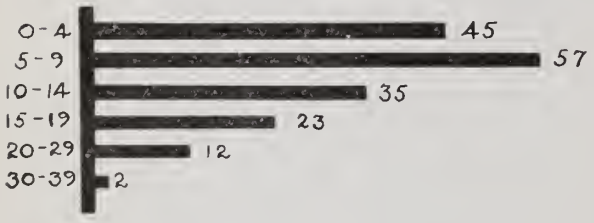
*"Infantile Paralysis in Vermont," State of Vermont, Department of Public Health, 1924.

Iowa of nearly 12. In the present series 57 per cent of the cases occurred in persons under ten years of age. In the Vermont series 82 per cent were under ten.

The figures suffice to show that the term "infantile" paralysis is a misnomer, for the reason that poliomyelitis attacks adolescents in far greater proportion than it does infants.

CHART III

Incidence of the disease by age groups—1930



DISTRIBUTION OF PARALYSIS

The following list gives the location of paralysis. In 154 of the 178 cases here recorded there was definite muscular impairment.

All extremities (arms and legs)	5
Both arms	1
Left arm	3
Right arm	7
Both legs	30
Left leg	22
Right leg	27
One leg	3
Both legs and abdomen	7
Left arm and both legs	2
Left arm and left leg	2
Right arm and both legs	5
Right arm and right leg	3
Facial (right)	1
Facial and throat	3
Throat	12
Respiratory (alone)	2
Both arms and respiratory	1
Left leg (incl. abdominal or respiratory)	1
Right shoulder	5
Shoulder	1
Back	2
Left arm, left leg and esophagus	1
Right foot	1
Left foot	1
Both legs, left deltoid, throat	1
Left shoulder, left hip	1
Orbicularis oculi	1
Right eye, left arm, both legs	1
Bulbar	1
No paralysis	24
Not stated	1
	178

Delay in Calling Doctor. Some attempt was made to ascertain the period of delay between the onset of the disease and medical attention. It was found that the interval varied from the date of onset to two weeks afterward.

On 13 of the case records the dates of onset and those of the doctor's first visit were not given. Of the remaining 165, 20, or 12.1 per cent, called the doctor on the day the patient was taken sick; 38, or 23 per cent, called the doctor on the second day of the disease; 27, or 16 per cent, on the third day; 20, or 12.1 per cent, on the fourth day; 17, or 10.3 per cent, on the fifth day. Only 35 per cent of the patients employed a doctor before the third day of the disease.

Other Illnesses. Correlation of cases with other illness in the family was sought but this was unsuccessful. In answer to the question, "colds or other illness in the family?" 37, or 21 per cent, answered "yes" and 136, or 63 per cent, answered "no", while 5 questions remained unanswered.

Roads. Correlation was also sought between the kind of road (paved, gravel, dirt) on which the patient lived and the incidence of the disease. This gave no results, for 61, or 35 per cent, lived on paved roads; 44, or 25 per cent, on gravel, and 66, or 36 per cent, on dirt, while 7 questions remained unanswered.

Convalescent Serum. Convalescent serum for the treatment of cases was used in 87 cases, or 48 per cent; other serum, (Lilly's, Rosenow's), was used in 13 cases, or 7 per cent, while 78, or 45 per cent, had no serum.

Convalescent serum is reputed to be most effective if used before paralysis occurs. Data were not procured to show the date after onset on which paralysis in the present series occurred, but information as to the time after onset that serum was given was received, with five exceptions.

In 8 cases, or 4.6 per cent, serum was given on the day of onset; in 13 cases, or 7 per cent, on the next day; 11, or 6 per cent, on the second day after onset; 22, or 12 per cent, on the third; 11 on the fourth; 6 on the fifth; 3 on the sixth, while 12 cases, or 13.7 per cent, received serum 7 days or more after the onset. One case was given serum 15 days after onset, and 34.6 per cent of the cases received serum before the fourth day of the disease.

Size of First Dose. The size of the first dose of serum varied from one cubic centimeter to 50 c.c. In four cases the dosage was not given. Of the 88 cases in which the dosage of convalescent serum was stated, one received as the first dose 1 c.c.; six received 5 c.c.; twenty, 10 c.c.; one, 12 c.c.; four, 15 c.c.; forty, 20 c.c.; two, 25 c.c.; five, 30 c.c.; eight, 40 c.c.; and one, 50 c.c. Some peculiar answers to the question of dosage were noted, e.g., one stated "750 units," one said "10,000 units" and one answered "10 drops night and morning for 10 days."

The number of doses given to one patient varied from one to six. The question was not answered in 4 instances. Thirty-four, or 35.4 per cent, received one dose, while an equal number received

2 doses. Fourteen, or 14.5 per cent, received 3 doses; eight received 4; five received 5; and one received 6. Since paralysis usually occurs by the third or fourth day after onset it is a matter for conjecture as to what results were expected from giving serum on the fifth and sixth days.

Results of Administration of Convalescent Serum. "Complete recovery" was reported in all eight of the cases which received serum on the day of onset; in 7 of the 13 cases receiving serum on the next day; in 3 of the 11 on the second day after onset; 4 of the 22 on the third day; one of the 11 on the fourth day; 2 of the 6 on the fifth day, and none of the three on the sixth day after onset. "Excellent" was reported in 5 cases in which the serum was administered on the third day after onset; in two cases on the fifth day, and in one case on the seventh day.

"Good" results were reported in one case when serum was given on the second day of the disease; in 5 cases on the third; in 11 cases on the fourth; in 3 cases on the fifth; in two cases on the sixth, and in one case each when serum was given on the seventh, ninth, tenth, thirteenth and fifteenth days.

"Slight improvement" was reported in one case where serum was given on the fourth day of the disease.

"No results" were reported in 4 cases which received serum on the second day of the disease; in one case on the third day; in 3 cases on the fourth day; in 6 cases on the fifth; in one case on the sixth; 2 on the seventh; one on the eighth; 3 on the ninth; 2 on the tenth. On six records the question was not answered.

Multiple Cases in Family. We are taught that secondary cases of poliomyelitis in the same family are of rare occurrence. By "secondary" cases are meant those other cases in the same family in which the epidemiologic evidence would seem to indicate that the second case was infected from the first one. Data are lacking as to the number of children in the families of those ill with the disease, hence it is impossible to calculate the amount of exposure offered. In 11 instances, or 6.1 per cent, of the cases, multiple cases occurred in families. In only one of these, however, did three cases occur, the other families having two cases each.

In three of these families the dates of onset of the second cases were sufficiently late to warrant the suspicion that the second cases received their infection from the first case, in spite of the fact that the incubation period of the disease is not definitely known. In one of these the date of onset of the second case was 10 days after that of the first, in one, 11 days, and in the third, 12 days. In the first two, the patients were brother and sister, 6 and 11 and 4 and 2 years of age, respectively. In the third, they were girl and boy cousins, living together, 4 and 15 years of age, respectively. In the family with three cases, all the patients, 5, 3 and one year of age, were taken ill on the same day. In two families, brothers in each of two families 11 months 2 years and 14 and 23 years, and sisters of 4 and 7 years, were taken ill within one day of each other. In one family of sisters 9 and 15 the interval was 2 days. In two families, one of 2 sisters, 2 and 4 years old, and one of mother and son, 36 and 15 years old, the interval was four days.

In the instances of the cases occurring within four days or less of each other, such evidence would seem to indicate that both patients received their infection from a common source and that the onset was later in the second case because of a longer incubation period or possibly because of higher resistance in the second patient. Here the question is raised, could not the incubation period of the second cases in the other families be as long as 10 or 11 or 12 days, and the source of infection be common to these as well as to the others?

Deaths. Death was recorded in 16 cases, giving a case fatality rate of 9. Three deaths occurred on the second day of illness; 2 each on the third and fourth; 3 on the sixth; one each on the seventh and ninth; 2 on the tenth; one on the twelfth, and in one case the date of death was not recorded. Of those who died, 12, or 75 per cent, were males and 4 were females. By age groups, they were divided as follows:

	Male	Female
0– 4	1	1
5– 9	4	0
10–14	5	0
15–19	1	2
20–24	1	1
	12	4

Muscles Involved. The muscles involved in those who died were given as follows:

Respiratory	2
Right arm, right chest, throat	1
Both legs, left arm, respiratory, speech, bladder	1
Right arm and right leg	1
Lower face muscles and deglutition	1
Left arm and left leg	1
Right arm and forearm and deglutition	2
Bulbar paralysis	1
Respiratory and deglutition	2
All muscles of extremities	2
Left arm, left leg, palate, esophagus	1
Throat	1
Total	16

Day Doctor Called. Of the 16 deaths, the doctor was called on the day of onset in 2 cases;

on the second day in 7 cases; on the third day in 3 cases; on the fourth day in one case; on the sixth day in one case and in two cases the date was not indicated.

Spinal Fluid. The spinal fluid was not examined in 7 cases, some of them marked "not permitted." Of the 9 remaining, the notations were as follows:

1. Normal
2. Negative, increased cells
3. 55 cells, tr. globulin
4. 430 cells, globulin
5. At autopsy, very bloody
6. 212 cells
7. 164 cells
8. 160 cells
9. 198 cells.

There were colds or other illness in the family in one instance, no colds in 13 instances and the question was not answered in 2 instances.

Four of the deceased lived on paved roads, five on gravel and six on dirt.

Eleven of the deceased were given serum as follows:

No.	Amt.	Day of 1st dose	No. doses
1	20 cc.	3	3
2	1 cc.	2	2
3	12 cc. (Lilly's)	3	1
4	10 cc.	3	2
5	5 cc.	8	4
6	10 cc.	6	2
7	5 cc.	8	2
8	20 cc.	Not given	1
9	20 cc.	3	5
10	40 cc.	2	1
11	No data—Rosenow's serum.		

Case Report

PYELONEPHROSIS—NEPHRECTOMY

FRANK S. HOUGH, M.D., Sibley

On the evening of March 6, 1931, I was hurriedly summoned to attend a young man twenty-six years of age, a resident of Sibley. He was having excruciating pain in the right hypochondrium and epigastrium, extending into the groin. He had been urinating frequently and passing considerable thick pus. On examining his genital region I found mucopus protruding at the meatus. The young man is deformed, with a very marked kyphotic spine. The history of spinal deformity was very indefinite. His mother said he had a fall at eleven years of age and the twisted spine and humped back developed slowly as he grew up.

The attack he was having suggested renal colic from calculus or Dietl's crisis. The sedimentary pus suggested pyonephrosis or pyelonephrosis. My confrere, Dr. H. L. Heetland, informed me that the patient had an attack eight years ago resembling this one, except that it was much milder. Roentgenography disclosed a complete absence of calculi in either renal pelvis, either ureter, or in the bladder. The symptoms were so acute as to preclude cystoscopy or ureteral catheterization.

We did an exploratory operation under ether, which was exceedingly difficult because the space between the twelfth rib and the crest of the ilium was reduced so much by his kyphotic and twisted spine, and from the fact that there was a complete lack of perirenal fat and the kidney was so movable, seeming to choose the right epigastrium for its residence. After the kidney was brought to the surface for inspection it was found that its pelvis was full and bulging with viscid pus which was expressed down the ureter into the bladder. The operation was for intended drainage, but with the index finger through the incision in the cortex, the pelvis was found to be so largely dilated that a nephrectomy was done, the ureter being cut through with the electric cautery. Almost as soon as the effects of the ether were over, except for the first two times (on which occasions the urine was bloody and loaded with pus) he voided normal clear urine of about 1024 sp.gr., totalling about 35 to 40 oz. per diem. This would strongly suggest that the left kidney had been carrying on the function of both kidneys and that the right kidney had ceased to function or functioned to a very small degree. His temperature reached 101 prior to operation, but has remained practically normal ever since.

To me the most interesting part of this case was the assembling of the different items—the history, the attack, the operative findings and the postoperative findings—into a picture. Let us assume that he had an infected kidney pelvis for a long time in some way related to mobility and misplacement. The obstruction, due to its kinked ureter, and its toppled over condition, was just enough to keep the pelvis full of pus but not enough to prevent its passage more or less slowly down the ureter. The vis a tergo of the secreted urine was gradually decreasing; also its functional activity. The Dietl's crisis was the result of the obstruction by the pus, or a kink. The operation was done after two days of agonizing suffering. He had had repeated hypodermics of morphine with but temporary relief. "Something had to be done." The cortex and pyramids seemed fairly normal, but the renal pelvic cavity was dilated. Drainage might have sufficed, but a subsequent nephrectomy would probably have had to be done.

STATE HEALTH COMMISSIONER'S PAGE

D. C. Strickland, M.D.

Poliomyelitis Warning

With the approach of the month of July last year came the first of the cases of poliomyelitis, the number of which reached the total of 222 for the year. This is greater by 46 cases than has been reported for any year since 1924. Only one case occurred previous to July in 1930, and that was reported in the month of April.

So far this year cases have been reported as follows: January, seven; February, one; March, three; April, 1; May, none.

It is reasonable to expect an increase in the number of cases of poliomyelitis after July, although probably there will not be as many cases as there were in 1930. However, doctors should be prepared to recognize cases early in the course of the disease.

Clinical Entity. It is generally agreed that poliomyelitis is essentially a disease of the central nervous system. A clinical conception based on the pathology of the disease permits grouping of the symptoms under two heads:

1. Those indicative of systemic reaction to a general infection.

2. Those referable to the specific action of the virus upon the central nervous system.

In general the symptoms in the earliest stage of the disease belong to the first group, while the more distinctive symptoms of later development belong to the second. Not infrequently the latter symptoms do not appear, the disease is aborted and paralysis does not develop. When paralysis does develop the two groups of symptoms are more or less completely merged.

Onset. The onset of the disease may be sudden or insidious: not infrequently it occurs in two stages separated by an interval of a few days in which there is a remission of symptoms. Next to fever (generally of low grade) which is almost invariably present, the most common early symptom is a gastro-intestinal disturbance; vomiting, sometimes with diarrhea, sometimes with constipation. In some outbreaks sore throat or symptoms suggestive of influenza are more prominent.

Either accompanying or immediately following these are other symptoms which are more distinctive, viz., a state of restlessness and irritability, followed often by an apathetic, drowsy state with marked disinclination to move the body or to be moved. Coma, delirium and convulsions are rare. At this time pain, both subjective and objective, is quite usual. Especially common and characteristic is a stiffness of the neck and spine, evidenced by the position which the patient takes in bed, by disinclination to bend the spine forward, and by complaint of pain when the spine is flexed by drawing the head forward or by lifting the shoulders or buttocks. The tendon reflexes, when tested carefully on the first or second day of illness, usually show some distinct abnormality, being either diminished or greatly exaggerated, or what is more significant, some being diminished or lost, while others are exaggerated. Even when actual paralysis has not occurred, marked tremor or ataxia on movement may be shown, together with a localized or general muscular weakness.

Paralysis. This condition, when it occurs, usually follows two or three days after the onset, but the interval is variable. It may occur on the next day, or it may be delayed for a week. It may, in rare cases, be the first symptom noticed. The paralysis is a flaccid motor paralysis without loss of sensation or even with an increased sensitivity to pain. It occurs most frequently in one or more groups of muscles of the extremities. More rarely the facial muscles and the eye muscles are involved. In fatal cases death ensues from paralysis of the muscles of respiration, usually preceded by progressively extensive paralysis of the extremities.

Treatment. The first essential is rest in bed during the whole of the acute stage and for at least one week after the temperature is normal. All handling of painful limbs must be avoided. Re-education of the affected muscles must be instituted cautiously. The sole specific treatment con-

(Continued on page 355)

SPECIAL ARTICLE

Editor's Note.—This is the second of a series of four special articles dealing with Coronary Diseases. The next article will be entitled Coronary Thrombosis and will appear in the August issue of the Journal.

ANGINA PECTORIS

FRED M. SMITH, M.D., Iowa City

Angina pectoris is one of the most characteristic manifestations of coronary artery disease. A sclerosis of the coronary arteries, which is usually extensive and associated with a partial or even complete obstruction of certain vessels is the most common pathologic finding. In those instances in which the sclerotic process is confined for the most part to the aorta, as in aortic syphilis, there is frequently an encroachment on or an occlusion of the mouth of one or both coronary arteries. Keefer and Resnik,[20] in a recent review of the mechanism of angina pectoris, considered in detail, the pathology associated with the condition. They collected a series of 386 cases from the literature which came to necropsy and added thirteen of their own. A coronary sclerosis was demonstrated in 381 of the total 399 cases. These authors pointed out that an aortic insufficiency was the predominating lesion in the instances of angina not associated with coronary artery disease, and in the vast majority of these, the valve leakage was secondary to syphilitic aortitis.

MECHANISM

The mechanism of angina pectoris has been extensively discussed and many hypotheses advanced. An aortitis, coronary artery disease, fatigue of the myocardium and more recently, an anoxemia of the cardiac musculature, are the most favored explanations. It is obvious, from the pathology ordinarily associated with angina pectoris, that the first two conceptions are closely related and that all except possibly the first, are fundamentally dependent on an impaired coronary circulation. It would seem that a sclerosis of the aorta, or an involvement of the coronary arteries, or a combination of these two factors is primarily responsible for all except the occasional instance of angina pectoris. The fact that coronary occlusion produces pain which strikingly resembles that of angina and that the basic pathology in the two conditions are identical, suggests that the mechanism is similar. This conception is further supported by the experimental studies of Sutton and Lueth,[21] and the electrocardiographic observations of Feil and Seegal,[22] Wood and Wolferth,[23] and others. Thus it is believed that the majority of all true Heberden's angina is dependent on a reduction in the blood supply to an area of the myocardium.

Under normal conditions, the blood supply to various sections of the myocardium is undoubtedly ample to meet the specific needs of the various structures, even during periods of stress. If, for any reason, the blood supply to a certain area is diminished, the efficiency of that section is reduced. This area of the myocardium may thus be overtaxed by a load that is well within the function capacity of the remaining cardiac musculature. While it is well known that the occlusion of a coronary artery may produce severe pain, it is conceivable that a less extensive disturbance of the blood supply to the same area of the myocardium may, during periods of exertion, cause distress with the same fundamental characteristics, but less severe, and disappears soon after the excess exertion is discontinued. It is, therefore, probable that angina pectoris and coronary occlusion differ only in the extent to which the function of the myocardium is disturbed.

Angina pectoris is occasionally noted in the rheumatic type of aortic insufficiency[20] and has been observed in other conditions as arteriovenous aneurysm,[24] paroxysmal tachycardia,[25] high grade anemia,[26, 27 & 28] hyperthyroidism,[29] and hypothyroidism.[29, 30] If each of the above conditions is analyzed, it is found that there are one or more factors which may reasonably promote the production of the angina. In aortic insufficiency and arteriovenous aneurysm, the low diastolic blood pressure reduces the rate of the coronary circulation. Experimental studies have demonstrated that the diastolic blood pressure is one of the most important factors in maintaining the coronary circulation.[31] If the diastolic pressure is diminished, there is at once a significant reduction in the rate of the coronary circulation, even though the systolic pressure remains constant, or even slightly elevated. It is believed that this factor contributes to the cardiac hypertrophy and later cardiac failure in the above condition. This conclusion is further fortified by the fact that it is possible to restore the diastolic blood pressure in arteriovenous aneurysm by operation and in certain instances, has been followed by reduction in size of the heart, even after the development of the clinical manifestations of cardiac failure.[31]

Studies on the physiology of the coronary circulation have also contributed to the explanation

of the angina during paroxysmal tachycardia.[32] Experimentally produced, tachycardia is associated with a striking reduction in blood pressure, which is in accord with clinical observations. There is, in addition, an increase in the work of the heart through the excess rate. The reduced oxygen carrying power of the blood in high grade anemia produces the same end result in a different manner. The increase in the work of the heart induced by a hyperthyroidism and the associated reduction in diastolic pressure, likewise reduces the cardiac efficiency and may contribute to the production of angina. In hypothyroidism, fatiguability is one of the outstanding clinical manifestations. It is not surprising that there may be an associated disturbance in cardiac function.

While the factors mentioned in connection with the above condition may contribute to the production of the angina, a disease of the coronary arteries is probably primarily responsible for the pain. Under these circumstances, the angina is less apt to be dependent on extensive changes in the coronary arteries. The angina is less likely to be of a serious nature, and a cure may possibly be effected by removing the exciting factor.

In the foregoing discussion of the mechanism of angina pectoris, the disease of the coronary arteries has been stressed. There are, however, no doubt, other causes for angina, as a dilatation of the aorta in syphilitic aortitis aside from the possible involvement of the coronary arteries, the rupture of an aortic valve and possibly, in rare instances, a spasm of the coronary arteries. When, however, a syphilitic aortitis can be excluded, the clinician is justified in attributing the angina to a coronary artery disease.

SYMPTOMS

The typical form of angina pectoris is generally known. The clinical manifestations, however, are variable and may be confused with other conditions, or even overlooked. In the beginning, there may be no more than a mild uneasiness or an indefinite sense of discomfort in the substernal region, a history of which may be elicited only by carefully questioning the patient. While the pain is usually regarded as being substernal and felt near the level of the third rib, it may be at a higher or lower level. In typical cases, the pain is transmitted to the left shoulder and often down the arm on the ulnar side to the elbow, and frequently to the fingers. Occasionally, the distress is transmitted to the right shoulder and down the arm. In some patients, the discomfort is first felt in the arm, and later, if the exciting factor is continued, appears in the usual location in the chest. The pain in some, may radiate to the head and neck and be felt in pharynx, jaw, mastoid region, or the ear, without appearing in the arms, or may begin in the neck or head and later reach the chest. The distress is not infrequently over the lower chest and upper abdomen, and occasionally may be entirely confined to the abdomen.

Even though the distress may vary in character and have a wide range of distribution, the type of pain, except for the degree of intensity and the extent of radiation during different attacks in the same individual, is constant. Furthermore, the attack of pain, except perhaps in the very severe form, where there is always a question of coronary occlusion, is usually excited by factors which increase the work of the heart. The exciting factor may be the added effort of walking or climbing stairs or it may be the load imposed on the heart by the increase of the blood pressure accompanying excitement, or again, it may be the interference with the cardiac function from overdistention of the stomach by a full meal, or possibly the associated accumulation of gas. In some instances, the patient is awakened from sleep by pain. It is possible that some of these may be induced by the increase in blood pressure resulting from sleep disturbances. There is, furthermore, always the possibility of coronary occlusion.

FINDINGS

The cardiac findings in angina pectoris are variable, or may be entirely negative. In those with demonstrable structural changes in the heart, the findings are those previously outlined under the general discussion of coronary artery disease. A roentgenologic examination and Wassermann test is indicated in every instance where the possibility of syphilis is suspected.

PROGNOSIS

The future of a patient with angina pectoris is always in doubt because of the possibility of sudden dealth. It is well to bear in mind, however, as pointed out by Herrick,[33] that recovery occurs—improvement is common—and some have been known to live twenty years. The outlook may be determined to a certain extent by the general condition of the cardiovascular system, the presence or absence of a hypertension, the size of the heart and the frequency and the severity of the attacks. The prognosis is obviously poor in those with advanced changes in the cardiovascular system, and the gravity of the situation still further increased by the frequent occurrence of severe attacks. The history of those with a luetic aortitis is usually progressively downward. In general, the prognosis is most favorable in those with normal blood pressure and in whom it is not

possible to demonstrate significant structural changes in the heart. The angina, associated with hypothyroidism, hyperthyroidism, high grade anemia, etc., may be frequently eliminated by the treatment of these conditions. The general temperament of the patient should be taken into consideration. In those with a hypersensitive nervous system, the basic pathology necessary to the production of the pain may be considerably less than in the placid individual. This is a recognized factor in the angina of women, and probably contributes to the production of the syndrome in hyperthyroidism. Finally, those patients who are faithful in complying with the recommendation of the physician, may add years to their life, whereas, on the other hand, by the disregard of factors which excite the pain, they may precipitate a sudden termination.

DIAGNOSES

Angina pectoris in the typical form, is readily recognized. In those with an unusual distribution of pain, the diagnosis may be difficult. When the distress is confined to the epigastrium and lower chest, and particularly when associated with an accumulation of gas, the condition is frequently mistaken for a gastric disorder or gall bladder disease. Not infrequently, the early manifestations of angina may appear to be entirely gastric and their significance not appreciated until later developments. It is always well to bear in mind the possibility of angina pectoris in every individual in the arteriosclerotic age who has a vague epigastric distress. Ordinarily, a careful detailed history and a critical survey of the cardiovascular system will enable the physician to come to a fairly definite conclusion regarding the possibility of angina. In the atypical form, the history is, by all odds, the most important step in the diagnosis and often the determining factor. This point is illustrated by the following case which has previously been cited:[34]

A man past sixty years of age consulted the writer because of a distress which was definitely localized in the epigastrium. This distress was described as a feeling of heaviness which appeared at fairly regular intervals, especially after the midday meal. Because of the location and the periodicity of the distress, a diagnosis of peptic ulcer had been made. Upon questioning the patient, it was discovered that the discomfort was seldom experienced except after lunch. It was further found that the patient was in the habit of walking to his office about one hour after lunch and it was during this time that the distress was usually noticed. He had observed that the pain promptly subsided after reaching his office and that he might obtain relief by resting on the way.

The precordial, or upper chest pain from an intercostal neuralgia or the nerve root pressure from a mediastinal tumor, tuberculosis of the vertebra, or a hypertrophic osteoarthritis of the spine may, at times, arouse suspicion or even closely resemble that of angina pectoris. Usually, the history is different and the physical examination will point to other possibilities.

Coronary occlusion has frequently been mistaken for the severe form of angina pectoris. The character and distribution of the pain may be identical. The pain in coronary occlusion, however, is usually more lasting and, instead of disappearing in a few minutes, may continue for hours or days and may be present in a minor form even after repeated hypodermic administrations of morphine. The onset is frequently accompanied by shortness of breath and may be followed by the other signs of cardiac failure. The changes in the cardiac findings may be sufficient to permit a definite diagnosis, even where the history is atypical. The distant and indistinct cardiac tones, gallop rhythm and premature contractions at once attract attention to the heart. The later appearance of a systolic apical murmur and the occasional pericardial friction rub on the following day are conclusive evidence of cardiac damage. These, along with slight elevation in temperature, moderate leukocytosis and reduction in blood pressure in the main, complete the clinical picture. If electrocardiograms are taken daily, the curves will often show alterations in the ventricular complexes with progressive changes in the T deflection.

The differentiation of angina pectoris from the minor forms of coronary occlusion is extremely difficult, yet very important from the standpoint of treatment. Whenever the attack of angina is more severe than usual, or comes on while at rest, the possibility of coronary occlusion should be considered, and when in doubt, the patient should be given the benefit of a period of absolute rest. If, in questionable cases, the heart is carefully watched for possible changes in the findings, the clinician will occasionally be rewarded by detecting a gallop rhythm or a pericardial rub, the latter of which definitely establishes the diagnosis. The electrocardiogram renders the greatest service in these atypical cases. The changes, however, may be easily overlooked, unless progress curves are taken.

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POLIOMYELITIS WARNING

(Continued from page 351)

sists of injections of immune or convalescent serum. This method has been accompanied by moderate success. Serum is reputed to be most effective if used before paralysis occurs. Of the series of cases in 1930, eight received serum on the day of onset. All eight of these were reported as completely recovered, thirteen cases received serum on the second day of which seven were reported completely recovered, three of eleven receiving serum on the third day were so reported and four of twenty-two receiving serum on the fourth day. For the dose of serum as administered during this series, of 87 cases receiving serum, 20 or 23 per cent received 10 c. c. and 40 or 46 per cent, 20 c. c.

Serum. Convalescent serum, that is, serum from persons who have recovered from an attack of poliomyelitis at least two months is the only serum which has proved of value for treatment of the disease. For treatment—give within 48 hours if possible and before paralysis—intraspinously, 5 to 15 c. c.—intravenously, 10 to 50 c. c.—or intramuscularly, 10 to 30 c. c. Repeat in 24 and 48 hours if symptoms do not subside or if after subsidence, they recur. Convalescent serum may be obtained from the Anna T. A. Glomset Laboratories, 1101 Equitable Bldg., Des Moines. Telephone 4-5109, Residence 5-7400.

Reporting. All cases of poliomyelitis must be reported to the local health officer within six hours of making the diagnosis.

SHIP'S HOSPITAL ORGANIZED AS CLINIC

Something new in marine hospitals made its bow to the medical world May 27th, when the "Empress of Britain," new 42,500-ton flagship of the Canadian Pacific line, steamed for Quebec on her maiden voyage, carrying below decks a medical clinic designed on metropolitan lines, complete even to hydrotherapy and dental surgery and capable of meeting the medical emergencies of 1,500 passengers and crew.

Under the direction of Dr. A. Gardner, well known to Atlantic voyagers, this sea-going hospital and clinic represent the latest and most advanced medical thought in Canada and Great Britain, as they were installed only after the plans and equipment had been carefully studied in both countries by the professional organizations most immediately concerned.

An operating theatre, a hospital with delivery room, an isolation hospital, a dental department with surgical room, an ultra-violet ray room, and a Roentgen-ray room, are grouped in units around the large waiting room for patients and the consultation rooms of Dr. Gardner and his staff. Hydrotherapy is provided in a special section of the ship's bath equipment. Dietetics is handled in the main cuisine.

The hospital and clinic have outside, natural daylight in addition to the special hospital artificial lighting. A complete change of air every hour, in volume equivalent to 200,000 cubic feet of fresh air per patient, is provided by a special unit of the ventilating system. Heat is provided by a vacuum system and regulated from a special device installed within the clinic. Music from the ship's orchestra, and radio concerts from shore stations picked up by the ship's transocean wireless, are relayed to the patients in the hospital just as they would be in a hospital on land.

To complete the picture, those two details without which no modern hospital apparently can operate—flowers for patients and telehone calls from anxious relatives!—are provided for by a florist's shop on an adjacent deck and by the telephone at each patient's bedside, these telephones connecting through the ship's switchboard with the transocean telephone exchange on the top deck, so powerful it can talk directly on short wave transmission to any telephone instrument in the world, the calls going through London, Montreal, and New York, via long distance.

The laboratory and case record equipment have been installed with the thought of eventually building up enough clinical material for study of marine complications of such ordinary disorders as are the routine of medical practice among travelers.

THE OPEN FORUM

In the June issue of the JOURNAL announcement was made that, agreeable to a motion adopted by the House of Delegates at the last annual session, an Open Forum would be created in the JOURNAL and contributions from members given full recognition in that section. To date, we have received no contributions for this section, but again call our readers' attention to this department. It should be borne in mind that the section, to be of greatest service, must be used for the discussion of problems affecting our society or the practice of medicine in its broader aspects and should not be employed for the discussion of personal or purely local matters. In order that we may appreciate the purpose of correspondence received, which may be used in this section, we urge that contributors definitely specify that their correspondence is intended for use in the Open Forum.

The JOURNAL of the
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ISSUED MONTHLY

RALPH R. SIMMONS, Editor.....Des Moines

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STATE SOCIETY SERVICES

During the last annual session of the Iowa State Medical Society, the House of Delegates received a report from the Board of Trustees indicating that if the activities of the society were to be maintained during the current year, an increase in membership dues would be required. The report submitted itemized the expenditures of the past year and indicated the scope of the activities of the various officers and committees operating under the budget. While it has been anticipated that the respective delegates will report back to their various societies on these matters, it further seems fitting that a detailed statement of the activities of the society be printed in the JOURNAL, so that each individual member may be fully acquainted with these activities and privileges which his dues purchase. At the time the House of Delegates voted the endorsement of the Trustees' report advancing the dues from $7.50 to $12.00, the opinion was expressed by some delegates that this increase might produce an element of dissatisfaction which would reflect itself in a decreased paid membership for the coming year. The officers of the society do not anticipate such a reduction in membership; in fact, they feel that if every member could know of the activities of the society and the benefits which his membership dues produce, every eligible physician in the state would be eager to maintain his allegiance and affiliation with the state organization.

It is recognized in all professions that the privilege of membership in the organized societies of that profession is a distinct honor and privilege since it designates that the member is favorably considered by his colleagues. It further indicates to the laity that such a member has met the standards of the official organization and upon investigation has been found worthy of the professional standards set by the organization which in turn inspires a high degree of confidence. Membership in the official medical societies extends to the member privileges, protection, fraternity and scientific advancement which could be obtained only through group effort and a pro rating of expenses. It should be borne in mind that the state society is not only a fraternal organization but a democratic organization,. one organized and managed for the welfare of the individual practitioner, the advancement of the science and the promotion of a higher standard of medical practice within our state. Some of the outstanding accomplishments of the Iowa State Medical Society are outlined below.*

ANNUAL SESSION

The traditional and first function of the Iowa State Medical Society is to hold an annual session for the presentation of scientific papers. There has been a gradual growth in the strength and quality of the annual programs, commensurate with the increasing strength of the society and the advancement of medical science and practice. There has been an increase in the registration at the last two annual sessions held in Des Moines, and numerous scientific papers have been presented at recent sessions of the society which have attracted interest outside the state. The technical exhibits are conducted in accordance with American Medical Association standards, only council-approved products and firms being admitted; and the income from these exhibits defrays a large part of the annual session expense.

THE JOURNAL

Membership in the society pays for a subscription to the official journal which is the recognized mouthpiece of the officers and committees and as such should acquaint the members with the problems and progress of practice within the state. The JOURNAL brings to its readers each month a group of scientific papers selected because of their scientific merit and very positive quality of education and interest to Iowa physicians. At the present time, we are receiving scientific papers from many national authorities as well as those contributed by outstanding Iowa physicians.

It is the effort of the Editorial Committee to present one or more case reports or clinics of an instructive nature in each issue of the JOURNAL and we have been fortunate indeed in securing during the school year valuable contributions of this sort from the proceedings of the University Hospital Clinical Society at Iowa City. A section,

* A summary of State Society Services will be found on Pages 360 and 361.

known as the Health Commissioner's Page, presents a monthly bulletin of communicable disease conditions as prevalent in Iowa with timely suggestions concerning the control of seasonable and frequently epidemic diseases.

In the editorial section of the JOURNAL, the attempt has been made to present definite scientific resumes of timely topics and it is to be noted that in many instances these editorials have been presented by outstanding authorities. At the present time, we are running a series of special articles, prepared upon request, which epitomize the newer knowledge relative to coronary diseases.

It is further the policy of the JOURNAL to submit editorials upon a variety of topics that will be informing, covering subjects such as the activities of medical or allied groups within the state; national news of particular interest to the Iowa physician and such official news and announcements as may be released by various official bodies of the society.

Since the JOURNAL is of, by, and for the Iowa physician, we attempt to cover county medical society meetings and activities in considerable detail, such items of personal news as might interest the Iowa physician, as deaths, removals, etc.

We have been fortunate in securing the cooperation of a well-chosen committee in the preparation of historical material which, in a suitable section, presents each month another epic of the growth of medicine in Iowa. The Book Review Section is maintained as a guide to the physician in planning additions to his library and a Directory of Advertisers assists in establishing contact with approved medical firms manufacturing medical products.

MEDICO-LEGAL COMMITTEE

The Medico-Legal Committee furnishes malpractice insurance to uninsured members, a protection consisting of court costs and attorney's fees in case of malpractice suits brought against members in good standing of the Iowa State Medical Society. These costs are met out of the general funds of the society and the average for the last five years has been $2,500.00. There has been a steady decrease in the last two years of the expenditures on this account and for the year ending May 1, 1931, the amount was $1,109.00. This saving has been effected through the more business-like arrangment with the attorneys representing the society and the insurance company which has insured the greater share of the members of this society. There is a constant increase in the number of members purchasing malpractice insurance from the insurance companies; so that under the present arrangement there has been a decrease in the uninsured members for whom court costs and attorney's fees must be paid. In this connection, the Board of Trustees and the Medico-Legal Committee (upon recommendation of the House of Delegates) have under advisement a plan for the purchase of group malpractice protection which would make a saving of five or six dollars per year to each member.

LEGISLATIVE COMMITTEE

The Legislative Committee has recently been one of the most active units of the Iowa State Medical Society and if its accomplishments were generally understood, it is safe to say that most of the members would feel that the results secured by this committee were worth more than their annual dues. The activities of the committee have been in three specific fields:

1. Improvement of medical practice.
2. Increase of workmen's compensation medical fee limits.
3. Public Health legislation.

1. Medical Practice

For the last 30 years, the cults in Iowa have been steadily working in the legislature, endeavoring to bring their various types of practice to the legal status of the medical profession. No improvement was made in the medical practice act during this period, with the result that the osteopaths of Iowa had taken unto themselves most of the privileges of the doctor of medicine; many chiropractors were in part practicing medicine; and there were innumerable quacks and unlicensed practitioners infringing upon all three groups. The Legislative Committee of the Iowa State Medical Society has taken the lead in a program which has well nigh adjusted this entire situation. In the legislature which met in the winter of 1929, a measure was passed which provided for an inspector in the Department of Health, whose duty it was to secure evidence of the violation of the various practice acts. In less than two years since the position was created, over 70 individuals have been restrained from violating the medical practice act in Iowa. In the 1931 legislature, an assistant inspector was added, since the number of cases awaiting attention of the one inspector numbered nearly 300 and both men are now busily at work.

In the last legislature, the osteopaths made a determined effort to secure the enactment of a bill which would have granted them the full privileges of medical practice. Not only was this measure defeated, but two laws were enacted which will tend markedly in the opposite direction. Effective July, 1931, it is illegal for any but an

M.D. to "prescribe or prescribe and furnish medicine." The second law requires that osteopaths and chiropractors (and doctors of medicine as well) must put the name of their profession, or the letters indicating it, after their names. In many communities in Iowa, it was impossible to distinguish between the osteopaths and the M.D.'s, for many osteopaths were simply using the title "Doctor."

There has been considerable dissatisfaction among the members of the medical profession because the words "internal curative medicine" (prohibited to osteopaths) should have been interpreted to include only specific remedies. The discovery of a little-known Supreme Court decision upon this point, coupled with a general increase in the law enforcement activities, has resulted in the prosecution of at least one non-medical practitioner for using internal curative medicine. This is looked upon as a test case and it is expected that others will follow.

2. Increase of Workmen's Compensation Limits

At the time your Legislative Committee seriously started work on these problems, the Workmen's Compensation Law limited to $100.00 the total which any employer had to pay for hospital, medical and all professional services in case of an injured workman. Not without difficulty this limit was raised to $200.00 a few years ago; and in 1929 after a spirited contest which lasted throughout the entire session, the limit was increased to $300.00.

While not every member of the society will every year have a workmen's compensation case that exceeds either of the former limits, yet any member may at any time find in his hands one of these prolonged cases, for which the present law will produce a much fairer remuneration. Each year since the increase of the limits, members of the Iowa State Medical Society have received several thousands of dollars of such fair and honest fees of which they would have otherwise been unfairly deprived. Even though some members may never receive any direct benefit from this increase, yet it is certainly to the interests of every member of the profession that the practice of arbitrarily robbing a physician of his fee should be ended and the principle established that professional services honestly rendered should be honestly paid for.

3. Public Health

In connection with various proposals of the Department of Health and the College of Medicine of the State University, the Legislative Committee has at different times opposed or supported various public health and medical measures, in accordance with the best interests of the profession as well as with the instructions given the committee by the House of Delegates and the Council. Foremost among these was the County Health Unit Law passed in 1929 which makes it permissible for a county to create a County Board of Health of 11 members for the control of all public health activities within the county and which provides that three of the 11 members of the County Health Board must be members of the county medical society. This law has been spoken of by members of the United States Public Health Service and other officials as being one of the most constructive of such local health measures, because it provides for proper control by the medical profession.

SPEAKERS BUREAU

The first project of the Speakers' Bureau was the promotion of the postgraduate extension work for members of the Iowa State Medical Society by members of the faculty of the College of Medicine of the State University of Iowa. Courses in obstetrics and cardiovascular diseases were offered in five centers and drew an enrollment of about 190 physicians from 24 counties. These courses met with the unanimous approval of those taking them and have resulted in many requests for similar courses next year.

Simultaneously with the promotion of this extension work, the bureau was taking steps toward getting a list of physicians who were willing and qualified to give papers or talks before medical groups. Letters were sent to each councilor requesting him to give the names of those physicians in his district whom he felt could do this work. Letters were then sent to these 250 doctors asking them if they would accept the nomination and, if so, to list their qualifications—post-graduate work, public speaking experience, list of prepared papers, etc. The bureau received answers from 40 physicians who had papers which were already prepared and indications from many others that they were willing to prepare papers on various subjects. Added to the other names that were already on file, these made a total of about 110 physicians who are listed with the bureau to speak to scientific audiences.

Several "teams" of speakers have been organized. That is, two or three men have prepared talks on one subject and are thus ready to present an entire evening's program of a symposial nature.

Through the services of these teams and speakers, the bureau has sponsored a few practical postgraduate courses of its own, of from four to eight

lectures. These are now being conducted in three counties and have been requested by other counties.

The Iowa Tuberculosis Association has this year booked its clinics through the Speakers' Bureau. In scheduling such clinics, the bureau has endeavored to do two things: (1) to make the clinics an educational factor for the whole community; and (2) to conduct them as regular meetings of the local county medical society. Whenever possible a Community Health Day is being featured—speakers sent to address the school children, P. T. A., service clubs, community gatherings—on the same day of the clinic, in addition to the clinic and county medical society program. The clinics handled in this way have met with unusual enthusiasm and approval. Eight clinics have already been held and 25 or more are scheduled for the near future.

The bureau is at the present time working on the problem of lay education, which is undoubtedly one of the most important and difficult phases of the work which comes under its direction. After considerable deliberation and consultation with all available authorities, the committee chose a list of about eight subjects along which lines it was felt that the general public needs instruction. (medical education, preventive medicine, etc.). Then a small group of between 40 and 50 physicians were carefully selected because of their special qualifications for this undertaking. Each of these men is to prepare talks on three or four of these subjects. When requests come in from lay organizations for speakers, the bureau will direct the choice of subject and in this way be enabled to carry on a concentrated educational campaign.

From these various lists of speakers, the bureau has sent out since June, 1930, 149 speakers. One hundred of these speakers went to 48 county society meetings; 49 speakers went to 46 lay meetings. Through our speaker placement service, we have been able to make society contacts with 36 county medical societies; with semi-scientific organizations in three counties; and with lay organizations in 25 different counties—a total of 49 counties to which the bureau has sent speakers. Arrangements made for the future include contacts with 18 counties that we have not yet reached.

The bureau is collecting a small library of material which will be of help to doctors in preparing speeches or papers. About ten packets of this material has already been sent to those requesting it. The bureau is attempting to keep a file of all papers given by their speakers.

It is a rule of the bureau that the expenses of any speaker sent out by it shall be paid by the organization requesting the speaker. The expenses include merely a mileage charge if the speaker drives, or carfare—nothing for his time. If any organization feels that it cannot afford to pay such slight expenses, they may petition the bureau to that effect and in such cases the bureau may pay the expenses itself.

INDIGENCY AND MEDICAL PRACTICE PROBLEMS

One of the outstanding contributions made by the State Society to problems of medical practice, was through the work of the Committee on Medical Education and Hospitals. At an expense of nearly $3,000.00 to the society and of thousands of dollars to the three members of the committee, who spent several weeks of their time during the period of 18 months, there was made a comprehensive study of the Perkins, Haskell-Klaus laws and their operation as affecting the public, medical education and the practice of medicine. This committee reported last December to the House of Delegates, and the House of Delegates last May adopted a constructive and careful plan for collecting all possible suggestions as to modifications of the law so that the Legislative Committee may use these suggestions as a basis for a constructive legislative program two years hence. Each member of the Iowa State Medical Society is invited to communicate in writing his suggestions in regard to modifications of the Perkins, Haskell-Klaus laws.

One of the acute problems of the medical profession in Iowa today is that of rendering satisfactory medical care to the indigent sick of the various counties. Many methods are being used in different parts of the state, but the only method which has been found to be generally satisfactory is by contract between the county medical society and the county supervisors. This plan has been approved by the Medical Economics Committee of the Iowa State Medical Society. Fifteen counties are now working under such an arrangement and numerous others have the plan under consideration. Three of these contracts have been in operation for several years, but about half of them have been completed in the last two years due to the constructive efforts on the part of the state society officers cooperating with the officers of the various county societies. Under this arrangement, the county society agrees to render certain specified medical and professional services to the indigent of the community for a fixed annual sum, which varies from $1,600 to $16,000 in the various counties.

SPECIAL SERVICES TO COUNTY SOCIETIES

The State Society is called upon to handle a considerable number of problems with regard to

State Society Services

THE ANNUAL SESSION: Three day scientific assembly, business session.

JOURNAL GIVES ITS READERS:

Scientific Papers.
Clinics and Case Reports.
State University of Iowa Medical College Section.
Official News and Announcements of State Society.
News of County Medical Society Meetings and Activities.
Personal Notes about Members.
Historical Section.
Book Reviews.
Open Forum.
Miscellaneous News of Hospitals, Public Health and Preventive Medicine.
A Directory (in the advertising pages) of approved, ethical firms, commodities and services for the medical profession.

MEDICO-LEGAL COMMITTEE FURNISHES:

Malpractice protection to uninsured members, consisting of court costs and attorney's fees.

LEGISLATIVE COMMITTEE WORKED FOR ENACTMENT OF:

Increase of Workmen's Compensation payments from a limit of $100 to the present limit of $300.

Creation of Inspection Division in Department of Health, with two full time inspectors to secure evidence and prosecute cases of violation of the practice acts. (Seventy individuals restrained from violating medical practice act in first two years.)

County Health Unit law which places medical profession in proper position of guidance in county public health activities.

Law making it illegal for any but an M.D. "to prescribe or prescribe and furnish medicine." Effective July, 1931.

Law requiring use of professional degree following the name of each practitioner using the title "Dr." Osteopaths must use "D.O." Chiropractor, "D.C.," so that the public may distinguish between them and the regular physician, (who must also employ his title, "M.D.," in all signs, letterheads, etc.) Effective July, 1931.

National legislation sponsored by American Medical Association.

Assistance given to state law enforcement officers, county medical societies, other state associations and the A. M. A. in enforcing of medical practice and health laws, in the elimination of malpractice and the control of quackery and charlatanism.

SPEAKERS BUREAU FURNISHES:

Post-Graduate Courses (five in 1930-31, with 200 members from 24 counties).

Scientific Papers to County Societies (100 speakers to 48 county sessions in 1930-31).

Clinics arranged through County Societies.

Lay Education on Value of Scientific Medicine (49 speakers to 46 meetings in 1930-31).

Promotion of District Meetings.

INDIGENCY AND MEDICAL PRACTICE PROBLEMS:

Operation of University Hospitals, Medical College and local commitments in caring for indigent sick studied by Committee on Medical Education and Hospitals, whose report is to be used as the basis for proposed modification of Perkins, Haskell-Klaus Laws to better serve the public and conserve medical practice.

Aid Given County Societies in arranging satisfactory method of caring for county indigent sick and payment therefor. (15 counties now have blanket contracts for the rendering of such services by the County Medical Society, for annual lump sums varying from $1,600 to $16,000. Half a dozen others have recently made contracts for the county to make individual payment on a reasonably high percentage of a regular fee).

COUNTY SOCIETIES GIVEN ADDITIONAL SPECIAL SERVICES, SUCH AS:

Advice and action of State Society officers and the Council in handling local problems as to membership standing, discipline, etc.

Advice in legal problems of organized medicine.

Adoption by State Society of fee bill recommended to County Societies.

SPECIAL SERVICES TO MEMBERS INCLUDE:

Rating of collection agencies which solicit physicians' accounts. Only those approved by Committee on Medical Economics are allowed to advertise in the Journal.

Information as to legal and ethical status of other practitioners.

Advice as to legal rights in collections, income taxes, etc.

Aid in securing scientific data.

Information as to proper procedures (as determined by Council and Committee on Medical Economics) in connection with lay health activities.

Information and advice regarding reliability of collection and finance services offered Iowa physicians by commercial agencies (through Medical Economics Committee.)

PUBLIC SERVICE:

Cooperation with Official and Lay Health Agencies.

Maintenance of continuous and effective cooperation with State Department of Health, University College of Medicine and other officers of the state.

Establishment of working relations and definite standards of local health procedures with lay health agencies of the state. A result of work in this field is a marked decrease in complaints that health or social workers in Iowa are ignoring medical ethics in their work.

membership in county and state societies, matters of discipline and other ethical problems. Those of a routine nature are handled by the secretary, while those of an acute or a special nature are properly handled and adjudicated by the Council.

The widening scope of activities in which county societies are today engaged, has increased the number of legal problems in connection with organized medicine. The State Society is frequently called upon to supply or secure legal opinions on various phases of medical practice or medical organization.

One of the very marked services rendered by the State Society to the component units was through the work of the Committee on Medical Economics in recommending an optimum fee bill. It was discovered that 47 of the 97 county societies in Iowa had fee bills, which were, at least, supposed to be in operation. Thirty-nine of these were secured and used by the committee as a basis for developing the model fee bill, which was then placed before the House of Delegates. The House of Delegates in the May, 1931, session recommended this fee bill to the favorable consideration of the various county societies. If this recommendation is favorably acted upon by most of the component units, it will be highly beneficial, for it is, of course, obviously difficult for one county to adhere to a fee bill when the surrounding counties are not endeavoring to protect the public by some uniform schedule.

SPECIAL SERVICES TO MEMBERS

The secretary and other officers of the State Society are continuously called upon to secure information and render advice regarding a wide variety of medical, legal, economic and social problems in which the members find themselves involved. Many inquiries are answered as regards the legal and ethical status of other practitioners. Legal questions in connection with income taxes, malpractice suits, etc., are frequently answered from the state office. Scientific data are frequently sought and the state office and the Speakers' Bureau either supply the data or relay the request to the proper library.

Through the office of the editor of the JOURNAL members of the Iowa State Medical Society may secure technical assistance in the preparation of scientific papers. We have fortunately secured an editorial proofreader of unusual ability, who in her spare time will gladly undertake, at a nominal fee, assistance in the compilation and correction of scientific papers.

Through the Iowa State Medical Library we are able to offer members a complete library service, including the searching of medical literature for the compilation of bibliographies and, in certain cases, the briefing and translation of foreign scientific publications.

Through this same avenue, as well as from our own office, we are able to offer a packet service which will provide any member with such current medical periodicals or books as may be available in the library. This service entails only the expense of the postage required for transmitting this material.

It is believed that a generous use of the editorial and library services will not only prove an expedient to the busy physician in the preparation of scientific papers but will contribute materially to their completeness and conformation to the accepted style in medical literature and may, in certain instances, prove extremely valuable in adapting a paper to a particular audience or publication having strict or unusual standards for acceptability.

PUBLIC SERVICE

One of the great contributions of an effectively operating state society is to secure for the component county societies and the members thereof, relief from friction with lay health agencies or from imposition upon the physicians of onerous or unethical public health undertakings. Through frequent conferences with the state officers of the various organizations which have lay health programs, the officers and the committees of the state society have assisted these various agencies in working out local health programs which are in keeping with the ethics and science of sound medical and health procedure. The result of this is that throughout Iowa, health and social workers are almost without exception working in accordance with proper medical procedures and are so conducting their activities today that very few complaints are received by the state officers in this connection. The various committees and officers of the state society are maintaining working relations with the official health agencies of the state so that friction may be avoided and the programs of each be based on sound policies and complete cooperation.

OUR CHANGING CONCEPTIONS OF HEALTH WORK*

If a health officer of 50 years ago could come back, like Rip Van Winkle, and visit the office of an up-to-date health department he would find himself literally in a new world, scientifically speaking. Many of the things he considered most

*Editor's Note: From a radio talk given by Paul B. Brooks, Deputy Commissioner of Health of New York State, June 3, 1931, from Station WGY. The program is sponsored by the New York Department of Health.

important in his day, he would learn, have been found to have had little or no effect on health. He would find the modern health officer—if he visited the right place—at the head of a staff of trained assistants, engaged in activities not even thought of in his day—public health nursing, child and maternal hygiene, public health education, laboratory diagnosis and research, sanitary engineering and all the rest. He would find that instead of putting their faith in quarantine, placarding and fumigating, as he did—"locking the barn door after the horse was stolen"—they were applying scientific measures to the prevention of disease.

It is a long jump from the ox-drawn covered wagon rumbling over muddy roads at five miles an hour to the modern limousine doing its sixty and the air mail its 200. Just as radically have our conceptions of public health work changed in the same time; and the change is still going on. Two things have been largely responsible: the development of bacteriology and the accumulation of experience. Take diphtheria as an example. In 1878 a leading New York State medical journal editorially "raked over the coals" a physician who had made the seemingly foolish suggestion that diphtheria might be caused by some living organism too small to be seen with the naked eye. A few years later the germ was discovered. Then came the life-saving antitoxin. Now we are no longed satisfied to cure. By a simple procedure children are protected so they need have no fear of the disease. In another generation there will be many physicians who have never seen a case of diphtheria, just as there are many today who have never seen typhoid fever.

Of all the recent developments perhaps the most remarkable has been the discovery of something called "bacteriophage." It now looks as if the disease bacteria may have in their turn, parasites infinitesimally small which under certain conditions prey on them and destroy them. Think what it will mean if we can get them enlisted on our side!

Then, with scientific methods to aid us, we have been learning from experience. As we climb higher we see farther and more clearly. As statistics have accumulated it has been possible to determine with increasing accuracy what activities really do save lives, prevent sickness and promote health and happiness. In the old days, in our ignorance, we wasted a lot of time "fighting shadows."

Public health education is one of the modern conceptions. Only a few years ago, when the health budget of one of our own large cities was being prepared, an eagle-eyed "economist" spied an item for "health education" and proposed to cut it out as unnecessary. Somehow it managed to stay in. Today every progressive city makes such a provision. Health education is nothing more or less than letting people know what health work means and how it affects them. Why shouldn't they know? They pay the bill!

We have scarcely made a beginning; yet even today many intelligent laymen know more about personal hygiene and public health than the average health officer knew 50 years ago. As people see and understand the results of public health work, they want more of it. Education is gradually clearing the road of the apathy and antagonism that once obstructed progress in this line.

As for the results of the application of these new ideas, they are apparent to anyone that has "eyes to see and ears to hear." Perhaps, when someone has been talking county nurses or pasteurization of milk, you have heard some wiseacre say something like this: "You may be all right, but my mother raised five children before they ever heard of county nurses or pasteurized milk." That, of course, settles the question! Naturally, babies have been born since the beginning of time and some of them have lived; but a much smaller proportion survived 50 or even 20 years ago than do today. At the end of 1930 there were over 12,000 children living in this state who would have died during the year if the infant death rate of 1910 had still prevailed. Make a similar computation for all of the intervening years and the total of lives saved would populate a large city. To those who think, facts are more impressive than wit.

Speaking of changing conceptions, one of the things that people are just beginning to learn is that efficient health work pays "in dollars and cents." A man or woman living and healthy is an asset to the family and the community. Money that would have been spent for services of doctors and undertakers is going into the bank and the earning capacity of the individual continues. There is no better advertisement for any county or city than that it is clean and healthy and has an efficient health department; and the two go together.

THE WOMAN'S AUXILIARY TO THE A. M. A. 4. WESTERN DISTRICT*

As my division in the organization work covers the states of the far west, branching to the middle states only to include Nebraska, this panorama will begin there. We have been enjoined for so

*Editor's Note: This is the fourth and last of a series of articles presented by the Committee on Publicity of the Woman's Auxiliary, giving a general survey of their organizational work. This installment was prepared by Mrs. James F. Percy, of Los Angeles, California.

many years to "Go West," that it has now become a favorite direction of travel.

Nebraska is always up and doing and a survey of activities of 1931 shows an extensive distribution of the National Auxiliary Study Envelope on "Communicable Disease Control"; much welfare work, especially providing professional visiting nurses for public schools in various counties and definite organization of county relief work at a great saving to the county commissioners. Here indeed is a far-reaching benefit for the community-at-large in a practical, economic way. Benefits are held to procure funds for completing files of scientific books and magazines and research work of the pathological laboratory connected with the Sharp Building Library at Lincoln. The Auxiliaries' scientific educational programs contain many important names; these, together with social and philanthropic activities keep everyone interested, useful and happy. One new county auxiliary has been reported as a last gift to this administration.

Colorado has kept up the interest aroused during the national presidency of Mrs. F. P. Gengenbach of Denver, particularly with spreading ideas of good and better health through the use of literature in the less populated districts. Included with this, Study Envelopes have been used and a greater field developed for approved health programs in other organizations. Growth in numbers has not been sought so much as growth in achievements.

Wyoming must be passed as having been silent to all requests for even a hint as to its status. Geographically, Wyoming and Utah are difficult of organization, but within the few years that lie ahead, they are certain to be caught in the vibration already swinging its way throughout the land and they cannot long be resistant to its call, we are sure. Utah has already given expression through her women visiting other states, that she is ready to take action to further a properly organized auxiliary.

New Mexico, with but one county, Bernalillo, organized and far from all centers of activity, has been an inspiration by their efforts to follow the national precepts. Unless one has travelled the great spaces of the southwest deserts, no conception of its distances can be formed. This one county has taken up child welfare work, sale of Tuberculosis Seals, enjoyed programs from their medical men, County Charities' Chairman, County Health Nurses and State Director of Public Health and carried the social activities of the State Medical Convention. They are few in numbers, but verily the leaven quickeneth the whole loaf.

Arizona has trebled its units from one to three, but has found organization work difficult, due to distances. Social features have prevailed unless some definite need has loomed in the offing, such as the Basic Science bill, for the passage of which the State Auxiliary made great effort. In a state so filled with cults, the passing of the bill by the senate was a real achievement, even though it was finally held up in committee. However, nothing daunted, the members are now aroused to the possibilities and usefulness of an auxiliary. and experienced women are stepping forward, willing to serve and assist in making an active, worthwhile organization.

California has been concerned, aside from organization, with establishing itself upon a permanent foundation through a proper constitution and has been able to do this with the full support of the California Medical Association, who are printing these constitutions as a gift to the State Auxiliaries.

At the recent state meeting, held in San Francisco, April 27, 1930, 165 women registered, with 55 delegates and 115 women seated at the annual luncheon. The auxiliary now feels safely established and on its keel.

The keynote of each county report was education, but the social side, welfare work, Red Cross, changing the position of a state senator, creating sentiment for a tuberculosis sanatorium, local philanthropies, all had their places with the scientific programs. A chart "The Technic of Following a Bill Through the Legislature" provided a most unique, striking and valuable object lesson of information as to what we are all up against in our legislatures and their procedure. This subject is highly recommended to all organizations.

A resolution was introduced and adopted and directed to the National Committee on the "High Cost of Medical Care," asking for a change in the name under which the committee functions, to one more in accord with the facts they are studying, namely: "The High Cost of Illness or Sickness." The original name implies some fault of the medical profession: while the proposed name is inclusive of all the various factors involved in the problem. A copy was sent to the National Auxiliary asking their indorsement of said resolution at the Philadelphia Convention. The California Medical Association presented a similar resolution to the National House of Delegates, whose membership now closely approaches 900.

The interest shown and the friendliness in the social life at this convention demonstrated a new order which we hope has come to stay.

Oregon has chiefly concentrated upon organization work and revival of general interest this year, through providing the units with a list of suggested study topics to encourage a similarity of subjects. Portland has monthly meetings with speakers who use the material contained in the study envelopes and are extending their educational and philanthropic interests as well. Temporary organization in one county is hoped to soon become permanent, thereby increasing their number and justifying the work of the state officers.

Washington is showing great interest in becoming organized and after considerable correspondence, it has been deemed best to have the primary action come through the state medical meeting which takes place in the near future. We feel it is safe to prophesy that Washington will be on the list of organized states for our successor.

Idaho is listed as an organized state, but as all letters have remained unanswered the panorama must end here.

To those who were fortunate enough to attend the national meeting at Philadelphia, no further stimulus will be needed. Each state will be eager to carry out the aims and ideals of the parent organization.

We learn from those who have achieved, and in Pennsylvania the accomplishments of the Auxiliary together with their complete plan for the national convention will give a wide understanding of a still greater organization and insure a generally more important recognition in the days to come.

DRS. COFFEY AND HUMBER DENIED CLINIC PRIVILEGE IN NEW YORK STATE

In the last issue of the JOURNAL, attention was directed to the controversy between the State Board of Social Welfare of the State of New York and the Drs. Coffey and Humber of California. It will be recalled that Drs. Coffey and Humber asked permission to establish a laboratory and clinic in New York State to carry on the experimental work in the treatment of cancer started in California. The proposition aroused much opposition from the officers of the County Medical Societies, the Department of Hospitals, and the City Health Department. At the hearing given before the State Board of Social Welfare many experts in cancer treatment, including Dr. John A. Hartwell, president of the New York Academy of Medicine, and Dr. James Ewing, America's outstanding author on cancer, testified. The opposition was offered on the basis that the State of New York had already provided ample avenues for cancer research and suggested that Drs. Coffey and Humber supply these established agencies with their treatment and permit them to carry on the research in the East. The State Board of Social Welfare has, as a result of this investigation, refused permission for the establishment of the proposed cancer clinic, but has granted Drs. Coffey and Humber permission to establish an experimental laboratory within the state.

THE MICHIGAN LEGISLATURE RECOGNIZES SCIENTISTS

During the recent meeting of the Michigan State Legislature resolutions were introduced by Dr. James T. Upjohn, senator from Kalamazoo and chairman of the senate public health committee, citing the accomplishments of three Michigan scientists in the field of medicine and chemistry. Those designated were Dr. Fred G. Novy, professor of bacteriology at the University of Michigan Medical School; Moses Gomberg, Sc.D., professor of chemistry at the University of Michigan, and Reuben L. Kahn, Sc.D., who devised the precipitation test for the diagnosis of syphilis. It is both interesting and significant that the legislative body of the State of Michigan should be so interested in the development of science within the state as to recognize and honor their distinguished investigators. The Michigan Legislature has established a precedent which may be followed with stimulating effect in other states.

CANCER COMMISSION OF THE CALIFORNIA MEDICAL ASSOCIATION

At its recent annual meeting the California Medical Association authorized the creation of a permanent Cancer Commission to represent the association in all phases of the organized fight upon the increasing menace of this disease.

As its first objective, the commission plans to review and bring widely to the attention of the profession in California the most modern methods of diagnosis and treatment of cancer, and especially of early cancer, since it is obvious that increasing numbers of patients with early cancer are seeking advice.

Later efforts will be directed toward education of the lay public on the signs and symptoms suggestive of early cancer. The establishment of specially equipped clinics and hospitals will be encouraged as well as more extensive clinical and laboratory research.

The commission has already been appointed and its plans of organization are well under way. The present members of the commission, as appointed

by the president of the California Medical Association, are: Dr. Charles A. Dukes, Oakland, Chairman; Dr. Lyell C. Kinney, San Diego, Vice Chairman; Dr. Alson R. Kilgore, San Francisco, Secretary; Dr. Harold Brunn, San Francisco; Dr. Orville Meland, Los Angeles; Dr. William Ophuls, San Francisco; Dr. C. G. Toland, Los Angeles; Dr. H. J. Ullman, Santa Barbara; Dr. A. H. Zeiler, Los Angeles; Dr. Junius B. Harris, Sacramento, President of California Medical Association, ex-officio member.

IOWA CHILD HEALTH CONFERENCE ORGANIZED

On June 9, Governor Dan W. Turner appointed a commission of sixteen members to study the problems of child health and protection in Iowa. There had been previously communicated to the Governor the following resolution adopted by the House of Delegates of the Iowa State Medical Society at the May session in Des Moines:

WHEREAS a President of the United States has deemed it wise to promote a national child health conference three times in the last twenty-five years, and

WHEREAS these conferences have always stimulated interest in and improved standards for child health and protection, and

WHEREAS the recent White House Conference on Child Health and Protection has so completely set forth the scientific facts pertaining to child health and protection and the gaps in their application from a national point of view, and

WHEREAS no such formal effort has been made to coordinate health and welfare activities on behalf of Iowa children, therefore

BE IT RESOLVED by the Iowa State Medical Society that the Governor of Iowa be requested to promote through existing agencies a Conference on Child Health and Protection in Iowa.

BE IT FURTHER RESOLVED that a copy of this resolution be sent to all agencies, official and voluntary, interested in child health and protection throughout the state.

Seven of the sixteen members of the commission are physicians: Dr. Channing G. Smith, of Granger, president of the Iowa State Medical Society; State Health Commissioner Daniel C. Steelsmith; Dr. Mae Habenicht of the State Children's Bureau; Dr. John H. Peck, president, Iowa Tuberculosis Association; Dr. J. F. Edwards, Ames, Health and Hygiene Department, Iowa State College; Dr. M. E. Barnes, professor of Hygiene and Preventive Medicine, State University College of Medicine; and Dr. Fred Moore, Des Moines, who was a member of the White House Conference. The other members are: Dr. L. W. Snuggins, Des Moines, president of the State Dental Society; Mrs. William Larrabee, Jr., Clermont, president of the State Federation of Women's Clubs; Mrs. Mary P. Summers, Sioux City, president of the State Parent-Teacher Association; Effie Doan, Des Moines, president of the State Conference for Social Work; Professor George D. Stoddard, Iowa City, director of the Child Welfare Bureau of the State University; Agnes Samuelson, State Superintendent of Public Instruction; Mrs. Bernard Dubbert, president of the American Legion Auxiliary; Mrs. B. C. Hopkins, Des Moines; and Mrs. S. E. Lincoln, Des Moines.

Two conferences have thus far been held, section and subcommittee chairmen appointed and plans made to study the entire field of child welfare work in Iowa and to work out plans for coordination and more efficient operation of the various projects and activities.

DOCTOR W. W. BEAM COMPLETES FIFTY YEARS OF PRACTICE

From *The Arrow* of Rolfe, Iowa, we learn that Dr. Watson W. Beam began the practice of medicine there, fifty years ago the 31st day of May. Dr. Beam is still actively engaged in practice and does not even confine himself to office practice, but answers any night calls that he receives. He was an important factor in the organization of the Pocahontas County Medical Society, and was its first president. From 1916 up to the present year, Dr. Beam has served as Councilor for the Eleventh District of the Iowa State Medical Society.

ERSKINE AUTHOR OF X-RAY BOOK

A statement from the Bruce Publishing Company, St. Paul (appearing in the advertising pages of this issue) announces the publication of a book by Arthur W. Erskine, M.D., of Cedar Rapids, entitled "Practical X-Ray Treatment."

Dr. Erskine has not only been active in the state and national roentgenological circles, but was a member of the Medical Education and Hospitals Committee of the Iowa State Medical Society, and was recently elected Councilor of the new Seventh District.

MEDALISTS OF THE AMERICAN INSTITUTE OF CHEMISTS

At the annual meeting of the American Institute of Chemists held in Washington, D. C., on May 9th, Andrew W. Mellon, secretary of the treasury, and his brother, Richard B. Mellon, Pittsburgh, received medals from the Institute for distinguished service to science and the profession of chemistry. The medals were awarded in recognition of the establishment and maintenance of the Mellon Institute of Industrial Research in Pittsburgh.

NOVEL EXHIBIT AT ANNUAL MEETING OF THE AMERICAN MEDICAL ASSOCIATION

For some time, the R. B. Davis Company of Hoboken, New Jersey, has run in the advertising pages of this JOURNAL, announcements concerning Cocomalt, the new chocolate-flavored food drink. Physicians attending the American Medical Association convention in Philadelphia recently were treated to an unusual display of this preparation in the exhibits where Cocomalt was served daily to visitors.

Minutes of the Iowa State Medical Society Eightieth Annual Session

May 13, 14, 15, 1931—Des Moines

Wednesday Morning Session, May 13, 1931

The opening session of the Eightieth Annual Session of the Iowa State Medical Society, held at the Fort Des Moines Hotel, Des Moines, May 13-15, 1931, convened at eight twenty-five o'clock, Wednesday morning, with President William A. Rohlf, Waverly, presiding.

Greetings were extended on behalf of the city by Mayor Parker L. Crouch, and on behalf of the Polk County Medical Society by Dr. Francis R. Holbrook. The response was given by Dr. Raymond S. Grossman, Marshalltown.

A medical clinic was conducted by Dr. Campbell P. Howard, Montreal.

Dr. Howard L. Beye conducted a surgical clinic, "Gall-Bladder and Duodenal Ulcer."

Dr. Dennis H. Kelley, Des Moines, presented a paper on "Rheumatic Heart Disease." Discussed by Drs. Julian D. Boyd, Iowa City, and Roland W. Stahr, Fort Dodge.

Dr. Albert D. Neubert, Fort Dodge, presented a paper on "Spinal Anesthesia in General Surgery." Discussed by Dr. John R. Jowett, Clinton.

Dr. Ben G. Budge, Ames, read a paper on "Honesty in Medicine." Discussed by Dr. Arthur D. Woods, State Center.

Dr. James F. Taylor, Sioux City, presented a paper on "Some Factors in Prolonged Labor." Discussed by Drs. Arthur L. Nielson, Harlan, and Delivan M. Fuiks, Manchester.

The meeting adjourned at twelve o'clock.

Wednesday Afternoon Session, May 13, 1931

The meeting was called to order at one thirty-five o'clock, by Dr. T. U. McManus, Waterloo.

Dr. McManus made the presentation of the gavel to President Rohlf.

Dr. Campbell P. Howard, Montreal, gave the address in medicine, "Some of the More Unusual Types of Cancer of the Stomach."

Dr. J. Charles Ryan, Des Moines, read a paper on "Preoperative Care."

Dr. John P. Cogley, Council Bluffs, read a paper on "Postoperative Care."

The papers by Drs. Ryan and Cogley were discussed by Drs. Donald Macrae, Council Bluffs; S. A. Spilman, Ottumwa, and William Jepson, Sioux City.

Dr. James C. Hill, Newton, read a paper on "Complications of Peptic Ulcer." Discussed by Drs. Walter K. Long, Hampton; G. Raymond Johnson, Ottumwa; M. Bannister, Ottumwa, and Donald Macrae, Council Bluffs. Dr. Hill closed the discussion.

Dr. Thomas A. Burcham, Des Moines, presented a paper on "Postoperative Atelectasis of the Lungs." Discussed by Drs. John L. Kestel, Waterloo, and H. A. Spilman, Ottumwa.

Dr. Norman F. Miller, Iowa City, presented a paper on "Retroversion of the Uterus." Discussion by Drs. Robert Knott, Sioux City; Charles Magee, Burlington, and Emil C. Junger, Soldier. Dr. Miller closed the discussion.

The meeting adjourned at five fifteen o'clock.

Thursday Morning Session, May 14, 1931

The meeting was called to order at eight thirty o'clock by President Rohlf.

Dr. Howard L. Beye presented a surgical clinic.

A medical clinic was conducted by Dr. Campbell P. Howard.

Dr. Archibald F. O'Donoghue, Sioux City, read a paper on "Compression Fracture of the Spine: A New and Simple Method of Treatment." Discussed by Dr. Frank M. Keefe, Clinton.

Dr. Andrew H. Woods, Iowa City, read a paper on "Psychopathic Personality." Discussed by Drs. George Donohoe, Cherokee; F. A. Ely, Des Moines, and Paul W. Van Metre, Rockwell City. Dr. Woods closed the discussion.

Dr. Thorald E. Davidson, Mason City, read a paper on "Hazards in Surgery of Toxic Goiter." Discussed by Dr. Frank B. Dorsey, Keokuk. Dr. Davidson closed the discussion.

The meeting adjourned at twelve o'clock.

Thursday Afternoon Session, May 14, 1931

The meeting was called to order at one thirty o'clock by President Rohlf.

Dr. Christian B. Luginbuhl, Des Moines, presented his paper on "Goiter."

Dr. C. C. Hall, Maynard, read his paper on "Present-Day Treatment of Pneumonia." Discussed by Dr. John F. Loosbrock, Lacona.

Dr. Horace M. Korns, Iowa City, read his paper on "The Effect on the Heart of Certain Chronic Diseases of the Lung." Discussed by Drs. Herbert W. Rathe, Waverly, and Benjamin F. Wolverton, Cedar Rapids.

Dr. John B. Synhorst, Des Moines, read his paper on "Surgical Treatment of Malignancies of the Stomach." Discussed by Dr. C. H. Cronk, Bloomfield.

Dr. George W. Mackenzie, Philadelphia, delivered an address on "Indications for the Simple Mastoid Operation."

Dr. John I. Marker, Davenport, read a paper on "Nervous Manifestations of Anemias." Discussed by Dr. Leroy F. Catterson, Oskaloosa.

The meeting adjourned at five o'clock.

Friday Morning Session, May 15, 1931

The meeting was called to order at eight thirty o'clock by Dr. W. R. Brock.

A dermatological clinic was conducted by Dr. Jay F. Auner, Des Moines.

Dr. D. C. Balfour, Rochester, Minnesota, presented a surgical clinic.

Dr. Frank P. McNamara, Dubuque, read a paper on "The Importance of and Need for More Post-mortem Examinations." Discussed by Drs. Harry P. Smith, Iowa City, and Daniel C. Steelsmith, Sibley.

Dr. Henry F. Dolan, Anamosa, read a paper on "Hydronephrosis." Discussed by Dr. Ora F. Parish, Grinnell.

Dr. Maurice C. Hennessy, Council Bluffs, read a paper on "Study of Incidence and Symptomatology of Ectopic Pregnancy." Discussed by Drs. J. W. Osborn, Des Moines; E. C. Junger, Soldier, and E. B. Woods, Valley Junction.

President Rohlf: Dr. Parker will read the report of the House of Delegates.

Secretary Parker: Mr. President and Members of the General Assembly: I will make this very short. First, the Eightieth Annual Meeting has been the most successful meeting we have ever had. Our total registration is something over 1,100, including the Women's Auxiliary and the exhibitors. Of that 1,100 there are 790 registered physicians. Our total registration in any previous meeting was 772.

The minutes of your House of Delegates will be published in the July issue of the JOURNAL OF THE IOWA STATE MEDICAL SOCIETY. There are just a few resolutions of importance that I wish to mention before the General Assembly.

First, I wish to report that the House of Delegates transacted their business in harmony and with precision, and there was more business transacted in the present session of the House of Delegates than has been transacted in the last three sessions of the House of Delegates combined.

One of the most important resolutions to be taken up and passed was that of the redistricting of the state into Councilor districts. You have eleven new Councilor districts, necessitating eleven new Councilors. Those new Councilors are as follows:

District No. 1 Felix A. Hennessy, Calmar.
District No. 2 L. R. Woodward, Mason City.
District No. 3 F. P. Winkler, Sibley.
District No. 4 William Jepson, Sioux City.
District No. 5 W. W. Pearson, Des Moines.
District No. 6 Wm. L. Hearst, Cedar Falls.
District No. 7 Arthur W. Erskine, Cedar Rapids.
District No. 8 Clyde A. Boice, Washington.
District No. 9 H. A. Spilman, Ottumwa.
District No. 10 J. G. Macrae, Creston.
District No. 11 A. V. Hennessy, Council Bluffs.

Trustee elected, Dr. O. J. Fay. Delegate to the A. M. A., Dr. Fred Moore; Alternate, Dr. N. G. Alcock.

President-Elect, B. L. Eiker, Leon; First Vice President, Prince E. Sawyer, Sioux City; Second Vice President, J. Fred Clarke, Fairfield.

Another resolution that was handled in the House of Delegates was that regarding the assessments in the component county societies. The dues for the next year were raised to $12. That amount is for the next year only. Your next place of meeting is Sioux City.

President Rohlf: Will you please escort Dr. Eiker to the platform?

Gentlemen, I want to introduce the next President-Elect. (Applause)

President-Elect Eiker: Mr. President and Members of the Iowa State Medical Society: It is with the greatest of appreciation that I acknowledge the honor that has been conferred upon me at this time.

The office of President-Elect, as you know, was created for the purpose of giving the chief executive of this organization an opportunity to have one year to acquaint himself with the workings of the organization. Therefore, it would be untimely for me to say very much at the present time. I am not unmindful of the fact, however, that there were other names before the House of Delegates as well as mine, the names of men who were just as capable and just as worthy, and perhaps more so. I trust that I may have their undivided support in the same manner that I would expect to give them mine, had the hand on the political fortune wheel stopped on their number instead of the one that it did.

I do not anticipate, if I live to be President in my own right, that my administration will be characterized by anything startling or spectacular. If, during my administration, the same high standard can be maintained that has been set by my illustrious predecessors, with perhaps strengthening a vulnerable point here and one there, which time alone demonstrates to exist, I shall be perfectly happy.

Now, as a last word, I want to thank you again most sincerely for the honor that I have this day received at your hands.

President Rohlf: Dr. Parker and Dr. Brock will escort Channing Smith to the platform.

The audience arose and applauded as President Smith was escorted to the platform.

President Rohlf: Gentlemen, your new President.

It is with the greatest pleasure that I perform my last official act as President of the Iowa State Medical Society, and that act is to present Dr. Channing Smith with the gavel, the emblem of his authority. As I do so, I am sure that we may all be well assured and confident that it will be handled with impartiality and with justice on all occasions.

I want to say for Dr. Channing Smith as President-Elect that he has put in not only hours but days, that he has traveled many miles in the interest of the State Medical Society while acting in his capacity as President-Elect. I want to acknowledge his great assistance, and the encouragement that he has given me throughout the year.

Now, Channing, I take pleasure in presenting to you this gavel and to congratulate you now as the President of this Society. (Applause.)

President Smith: Gentlemen, it will be remembered that I am responsible to you. I would like to have you also remember that you are responsible for me. I will give you the best that I have. I have appointed the following men as Chairmen of the various sections: Section on Medicine, Dr. Daniel J. Glomset, Des Moines; Section on Surgery, Dr. Howard L. Beye, Iowa City; Section on Ophthalmology, Otology and Rhinolarngology, Dr. Jesse B. Naftzger, Sioux City. The first official act of my administration is to dismiss you. (Applause)

The meeting adjourned at twelve o'clock.

Transactions House of Delegates

Iowa State Medical Society, Eightieth Annual Session May 12, 13, 14, 15, 1931—Des Moines

The House of Delegates of the Iowa State Medical Society met in the Oak Room of the Hotel Fort Des Moines, and was called to order by President Rohlf at 1:50 p. m.

Roll call by registration showed the presence of 57 delegates and 18 alternates, a total of 75.

The Secretary, Dr. Robert L. Parker, moved that the minutes of the Friday morning session of 1930 be approved as printed in the July, 1930, issue of the JOURNAL OF THE IOWA STATE MEDICAL SOCIETY. Upon motion, duly seconded and carried, the minutes were approved.

REPORTS OF OFFICERS

REPORT OF THE SECRETARY

The Secretary, Dr. Robert L. Parker, moved that his report be accepted as printed in the handbook, and that those parts dealing with finance be referred to the Committee on Finance. The motion being duly seconded and carried, the report was thus accepted and referred.

House of Delegates, Iowa State Medical Society:

The following report for the year 1930-1931 is respectfully submitted:

Following our experience with the last session of the Legislature, we concluded that some members were elected as a result of political accident. I have always considered my promotion to this office in the same light, but with the efficient managing director and capable help in the office, I have tried in some small way to continue the excellent work of my predecessor who has advised me capably and willingly.

Activities in the office have increased many fold. The Iowa State Medical Society has a greater service to render the citizens of the state and the members of the profession than to hold an annual meeting. Numerous bureaus and committees have been established and are doing valuable work for the laity and profession of the state. I will let their individual reports speak for themselves. I wish to mention particularly the work of the Legislative Committee, the Committee on Education and Hospitals, and the Speakers Bureau.

This being my first report, I see no occasion to review the membership of previous years, which can be found in my predecessor's last report. On April 1, 1930, we reported to the A. M. A. 1,852 paid members. On April 1, 1931, we reported 2,021—an increase of 169. As of May 1, the paid-up membership of the society is 2,046. There are 365 delinquent members, practically all of whom will make payment during the current year, which makes a total of 2,411 physicians affiliated with the Iowa State Medical Society. There are approximately 236 eligible physicians who are not members.

Despite continuous efforts to keep in the office an accurate record of non-members as to their eligibility, it is impossible to state with certainty at any given time the exact number of eligible non-members. The reasons for this inaccuracy are: (1) delayed reports from county secretaries; (2) frequent listing as eligible non-members those who are in reality not in active practice; (3) an actual change in status of a given physician. However, using the above figures we have a total of 2,647 who are eligible to membership, of whom 2,411, or 91 per cent, are affiliated with the State Society.

It is my feeling that special consideration should be given the seventy-one retired physicians who are listed as not in practice. It would seem that we could best serve the interests of the profession by granting life membership or some other form of honorary recognition to all physicians actually retired who have been actively affiliated with the society in the past—regardless of the exact number of years. The constitution and by-laws provide only two methods for granting life membership: (1) by virtue of thirty years of continuous membership; (2) by action of the House of Delegates. It is obvious that the arbitrary thirty-year rule not only works a hardship on many deserving retired members but also would permit many men in their fifties, who are perfectly able and willing to remain active members, to apply for and receive life membership. It is therefore my suggestion that we should place less emphasis on the thirty-year rule, and that we should seek out all worthy retired physicians, who should be first awarded honorary or life membership in their various County Societies, which societies should in turn

request the House of Delegates to vote life membership in the State Society.

Another group of physicians who should be given special attention are the new licensees who each summer and fall locate in various parts of the state. A survey just completed shows that of the 155 most recently licensed physicians, only 35 have been taken into organized medicine. Of the remaining 120 approximately one-half are located outside of the state, but it is evident that there are 50 or 60 new men who should be taken into County and State Society membership. There is a great responsibility resting upon the county secretary, in this opportunity to serve organized medicine and these young men.

The facts cited above are set forth in tabular form in the accompanying tables. Table I shows the total members, eligible and ineligible, and percentages, and also lists the counties by percentage of eligible members belonging to the various societies. It is encouraging to note that 33 County Societies have 100 per cent membership. Last year there were 23 such counties. There has not only been an increase of 10 but we now have over one-third of the county societies with 100 per cent membership.

Table II shows the detailed figures from which the report is made, giving by counties the 1931 membership, delinquent members, eligible non-members, ineligible non-members, those not in practice, and percentage of eligible physicians who are members. It is hoped that this table will be carefully studied by the various county officers and that any discrepancies will be reported to the Secretary's office.

Let no one feel that undue emphasis is here being placed upon membership, for the best bulwark with which to meet the problems of the future is a united profession.

TABLE I

Active Members	2,046
Delinquent Members	365
Total number of members affiliated with Iowa State Medical Society	2,411
Eligible Non-Members	236
Percentage of eligible physicians having membership	91 per cent
Ineligible Non-Members	120
Physicians retired or not in practice	71

100%—Adair, Adams, Audubon, Boone, Calhoun, Cass, Cedar, Grundy, Howard, Humboldt, Ida, Iowa, Jackson, Jones, O'Brien, Osceola, Palo Alto, Pocahontas, Poweshiek, Shelby, Taylor

Chickasaw	Marion	Union
Dickinson	Marshall	Van Buren
Floyd	Mitchell	Webster
Fremont	Montgomery	Worth

99%—Black Hawk
98%—Lee
97%—Scott
96%—Hardin, Johnson, Polk
95%—Benton, Pottawattamie, Sioux
94%—Bremer, Dubuque, Sac
93%—Cerro Gordo, Emmet
92%—Clay, Franklin, Story, Tama
91%—Hancock, Winnebago, Henry, Madison, Wapello
90%—Woodbury
89%—Carroll, Greene
88%—Dallas, Guthrie, Des Moines
87%—Muscatine
86%—Butler, Decatur, Monona
85%—Davis, Monroe
84%—Clayton, Hamilton
83%—Appanoose, Buena Vista, Cherokee, Clinton, Page
82%—Clarke, Lyon, Washington
81%—Iowa, Jefferson, Mahaska
79%—Harrison, Linn, Wright
78%—Jasper, Wayne
77%—Fayette, Warren
72%—Plymouth
71%—Lucas, Mills
68%—Crawford
67%—Ringgold
66%—Delaware
65%—Keokuk
62%—Allamakee
60%—Louisa

Financial Report of the Secretary

The financial affairs of the Secretary's office are set forth in the following extract from the auditor's report:

Income

Balance in bank May 1, 1930	$ 00.00	
Dues	17,565.00	
Honorarium—Advertising Bureau, A. M. A.	508.39	
Advertising	8,340.86	
Reprints	587.78	
Subscriptions, non-members	28.62	
Sales	.90	
Total		$27,031.55

Disbursements

Commissions to Adv. Bureau, A. M. A.	$ 1,341.53	
Paid to E. B. Winnett, Treasurer	25,075.72	
Total	$26,417.25	
Returned check	7.50	
Balance in Bankers Trust Bank, April 30, 1931	606.80	
Total		$27,031.55

Robert L. Parker, Secretary.

TABLE II

County	1931 Membership	Delinquent Members	Eligible Non-Members	Ineligible Non-Members	Not in Practice	Percentage of Eligible Physicians Who Are Members
Adair	8				1	100
Adams	7					100
Allamakee	7	1	5	1		62
Appanoose	11	8	4			83
Audubon	8	1				100
Benton	16	2	1		1	95
Black Hawk	59	8	1	6	1	99
Boone	22	1			5	100
Bremer	15	1	1	2		94
Buchanan	17	3	2	2	3	91
Buena Vista	11	4	3		1	83
Butler	10	2	2	1		86
Calhoun	17	4			1	100
Carroll	22	3	3		2	89
Cass	20	1		9		100
Cedar	10	7			1	100
Cero Gordo	39	3	3	3	1	93
Cherokee	10	5	3	1		83
Chickasaw	15			1		100
Clarke	9		2			82
Clay	11		1			92
Clayton	16		3	1	4	84
Clinton	37	3	8	1		83
Crawford	5	8	6	3		68
Dallas-Guthrie	39	4	6	1	1	88
Davis	9	2	2			85
Decatur	10	3	2			86
Delaware	9	1	5	2		66
Des Moines	36	3	5	2		88
Dickinson	10					100
Dubuque	48	2	4	10		94
Emmet	12	1	1			93
Fayette	17	6	7		1	77
Floyd	17			4		100
Franklin	11		1			92
Fremont	13	1			2	100
Greene	16	1	2	1		89
Grundy	2	8				100
Hamilton	9	6	3		1	84
Han. - Winn.	20	1	3		1	91
Hardin	27	1	1		2	96
Harrison	12	7	5			79
Henry	17	4	2			91
Howard	9	1			1	100
Humboldt	4		3		1	100
Ida	12			1		100
Iowa	13		3	1	4	81
Jackson	16	1		1	2	100
Jasper	21	4	7		2	78
Jefferson	17		4		1	81
Johnson	87	17	4	2	1	96
Jones	12	2		1		100
Keokuk	14	5	10	2		65
Kossuth	13	5	2			90
Lee	37	6	1	4	3	98
Linn	85	14	26			79
Louisa	7	2	6	1	1	60
Lucas	7	3	4		3	71
Lyon	7	2	2	1		82
Madison	10	2	1		1	91
Mahaska	22		5	1		81
Marion	19	1		2	1	100
Marshall	44			4		100
Mills	10		4	2	3	71
Mitchell	10	1		4	1	100
Monona	12		2	1	1	86
Monroe	9	2	2	1	1	85
Montgomery	13	4			1	100
Muscatine	27	1	4		1	87
O'Brien	10	6				100
Osceola	8	1				100
Page	24	1	5			83
Palo Alto	10	1				100
Plymouth	15	1	6			72
Pocahontas	18			1		100
Polk	163	62	13	23		95
Pottawattamie	57	4	2	5		95
Poweshiek	21	1				100
Ringgold	8		4			67
Sac	16		1			94
Scott	70	19	2	14		97
Shelby	9	1			1	100
Sioux	15	4	1		2	95
Story	26	7	3	2		92
Tama	18	5	2	1		92
Taylor	12	4				100
Union	15	4			2	100
Van Buren	9	2		2	1	100
Wapello	37	4	3	3	4	91
Warren	11	2	4	2	1	77
Washington	19		4			82
Wayne	13	1	4			78
Webster	40	9				100
Winneshiek	13	1		2	1	100
Woodbury	88	28	12	7	1	90
Worth	7					100
Wright	21	1	6	1		79
Total	2046	365	239	120	71	Av. 91%

REPORT OF THE TREASURER

Dr. E. B. Winnett, Treasurer, presented the following report:

The report of the Auditor as of May 1, 1931, shows that the Society is $5,081.85 in the red.

During the last year the Board of Trustees authorized a new system of bookkeeping, showing the expenditures for the various activities of the Iowa State Medical Society. A study of the accounting under this system shows that the deficit is not for extra expenses caused by running the Society, but that it has been spent for extra activities of the Society and extra committees of this Society. This extra expense includes the Medical Education and Hospitals Committee, quackery, a deficit due to the cost of the last annual session, and expenses incurred by the Committee on Public Policy and Legislation.

If this Society wishes to maintain those activities started this year, some new method must be adopted or something must be done in order to gain more money to pay for them.

Another matter that the Treasurer has before him at this time is that the $25,000 worth of Liberty Bonds on deposit at the Iowa National Bank will in all probability be called in 1933. These can be sold at this time at $104.50 and make the Society $1,000.00. According to the Constitution and By-Laws, this money must be reinvested immediately in Liberty Bonds, and to reinvest in Liberty Bonds at this time, we can invest in a new type of Liberty Bond that will cost us $101.22 to $101.30, which will yield interest at 3.17 per cent. At the present time the market price of the bonds will net 2.48 per cent if we sell. If we sell them at $104.50 and buy the new type at $101.00, we will have more money invested with less interest coming in each year. This will be taken up by the Board of Trustees.

E. B. Winnett, Treasurer.

The Treasurer moved that the report be received and referred to the Finance Committee. The motion was duly seconded and unanimously carried.

REPORT OF THE COUNCIL

In the absence of the Chairman of the Council, Dr. Peck, the President, called upon the Secretary of the Council, Dr. Gray, to give the report.

Dr. Samuel T. Gray, Secretary of the Council, read the report as printed in the handbook, and moved that it be received. The motion was duly seconded and carried.

House of Delegates, Iowa State Medical Society:

The election on the last day of the 1930 session of the society, resulted in four new Councilors being chosen, viz.: Dr. Thomas A. Burcham of Des Moines, Dr. C. A. Boice of Washington, Dr. Albert V. Hennessy of Council Bluffs and Dr. William Jepson of Sioux City. Dr. Thomas A. Burcham, who succeeded our president-elect, Dr. Channing G. Smith, as Councilor for the Seventh District, resigned the office after consideration of the heavy burden of the legislative session. The Board of Trustees appointed Dr. John H. Peck to fill the vacancy until the next annual meeting and at the first subsequent meeting of the Council he was elected chairman.

The Council has held four meetings since September and has transacted a considerable amount of routine business. An outstanding adventure into unknown medical fields was the appointment of a Committee on Speakers Bureau which will elsewhere report its activities to this body. Doubtless this bureau will exert tremendous influence in inspiring a desire for postgraduate instruction along various lines of medical practice and incidentally in bringing the membership into closer bonds of fellowship. Several other committees which are closely related to the Council, have served the society most acceptably and should be continued.

The recent redistricting of the state by the Legislature into nine Congressional districts necessitates a change in our Councilor districts. The report of the Committee on Constitution and By-Laws suggests uniform grouping of nine counties in each district. The Council has favored and advocated more compact Councilor districts at previous sessions of this Society and will doubtless profit most by the proposed realignment. Renewed activity on the part of the Council may be expected to result from an acceptable redistricting plan.

Membership is desirable but organization activity is essential. This year a larger percentage of Iowa physicians than ever before have paid their annual dues and are active in the affairs of the Society. The effort to interest the recent graduate in organized medicine is meeting with a most gratifying response. On the whole, satisfactory progress has been made by the Society during the past year, due largely to an appreciable increase in the attention of the Council and other interested members to the problem of improving and increasing the zeal of the county societies.

John H. Peck, Chairman of the Council.

REPORTS FROM COUNCILOR DISTRICTS

First Councilor District

Dr. C. A. Boice, Councilor for the First District, moved that his report, as printed in the handbook, be received. Motion seconded and carried.

House of Delegates, Iowa State Medical Society:

Six of the seven county societies in the First District are active and hold meetings regularly.

Henry County has 18 doctors, 17 of whom are members of the society. They hold twelve meetings yearly; the average attendance is 66 per cent and the interest is good.

Jefferson County has 18 doctors, 16 of whom are members of the society. They hold eight meetings yearly; the average attendance is 80 per cent, and the interest is average.

Van Buren County Medical Society has had no meetings during the past year. Two were arranged, but the weather man did not cooperate. Eight of the members met with the representative from Van Buren County recently on legislative matters.

Louisa County Society has been very active in the past year and a half. They have held monthly meetings, each with a good dinner and a good program. There are 16 physicians in the county; three are not in practice, and of the other 13, 8 are members of the society.

Des Moines County has 46 physicians. Forty are in the society, there being five ineligibles in the county and but one eligible physician outside the fold. Nine meetings are held yearly with an average attendance of 52 per cent. The interest manifested is good.

Washington County has 21 physicians, all eligible and all members of the society. There are three elderly, non-practicing physicians in the county. Ten meetings are held yearly, with programs of a post-graduate type, and the interest is excellent. The average yearly attendance exceeds 75 per cent. An annual banquet is held in September at which the wives and others are given a good time. This society has organized its own credit and collection Bureau, has conducted an advertising campaign in all the county newspapers during the past winter that has brought good results in collections, and is conducting a weekly health article in the *Daily Journal* for the year 1931.

Lee County. There are 44 physicians in the county, 41 being members of the society. There are two ineligibles and only one eligible non-member. Four meetings are held yearly with an average attendance of 50 per cent. The interest manifested is fair.

Three counties: Washington, Henry and Jefferson, as well as the physicians of the city of Fort Madison, have contracts with County Boards of Supervisors for the care of the indigent sick.

Under the Washington County contract, which is for $1,800.00, the county furnishes arsenicals, insulin, antitoxins and serums. From the money received under the contract the county society pays society expenses and county, state and national society dues. The balance is prorated for work done, according to an established fee bill. The County Home and jail are not included in the contract.

The Jefferson County contract included Fairfield and one township only. The amount is $1,600.00. The work is rotated monthly. Out of the fund the society pays society expenses and state and county dues and malpractice insurance.

In Henry County the work is done by members of the society, who are paid by the county society secretary according to an accepted fee bill. Ninety per cent is paid to the attending physicians and 10 per cent is kept for society expenses. Fort Madison has a $2,000.00 contract, and furnishes everything. Society expenses are paid from the proceeds of the contract, as well as county, state and national society dues. The balance is prorated. Service is rotating.

Three counties, Washington, Henry and Jefferson, have county hospitals.

Two counties, Washington and Des Moines, have health units.

In only two counties are the physicians' wives organized as auxiliaries, Washington and Louisa.

All the counties represented in the district have taken an active part in politics this winter and kept their legislators informed.

C. A. Boice, Councilor.

Second Councilor District

Dr. A. P. Donohoe, Councilor for the Second District, was not present. Dr. T. A. Burcham, Des Moines, moved that the report be received as printed in the handbook. The motion was duly seconded and carried.

House of Delegates, Iowa State Medical Society:

The six counties comprising the Second District are functioning in the usual satisfactory manner. Each county seat is the center of medical activities for that county; namely, Clinton County at Clinton; Jackson County at Maquoketa; Johnson County at Iowa City; Muscatine County at Muscatine; Iowa County at Marengo and Scott County at Davenport.

Internally we are 100 per cent, but externally we have the famous Baker Institute at Muscatine, and the Benadom Hospital at Davenport to contend with. As things stand at the present time, it looks as if the institute at Muscatine is to be put out of business. The Supreme Court has reversed a previous favorable decision for the institute and the Radio Commission seems favorable toward closing the radio station. It looks very much to us as if the fangs have been pulled from the rattler.

In Davenport, the Benadom case is still pending with the hope that a permanent injunction may be obtained in the near future.

Our one hope is that our present pleasant medical relationships in the district may continue.

A. P. Donohoe, Councilor.

Third Councilor District

Dr. Fred F. Agnew, Councilor for the Third District, was not present. Upon motion duly made, seconded and carried, the report as printed in the handbook was received.

House of Delegates, Iowa State Medical Society:

While no visits, by the Councilor, have been made to the various county societies since the last meeting, correspondence has been carried on with most of them through the Deputy Councilor. From this correspondence it seems that unusual activity has prevailed in all things pertaining to the good of organized medicine, and especially the work of the Legislative Committee.

Dubuque County has held ten regular and four special meetings with an average attendance of 18 members. The society suffered severe losses in the deaths of Dr. James P. Guthrie on March 13, 1930, and on November 23rd, by the death of Dr. Wm. R. Becker. Probably no physician in Iowa of the passing generation was better known or more popular than was Doctor Guthrie.

On September 23rd, 1930, Dubuque County held its seventy-seventh anniversary meeting which was attended by 200 doctors living in and adjacent to Dubuque.

In November, 1930, Sister Mary Florine, Superintendent of St. Joseph's Mercy Hospital, opened negotiations with the Dubuque County Medical Society, to open Mercy Hospital, which had a closed staff. Several conferences were held, leading toward the ultimate solution of the hospital problem. The society has also been active in combating several forms of malicious practice, particularly in the case of the Baker Institute.

Delaware County Medical Society has been active during the past year with nine meetings and an active interest in the affairs of the medical profession of Iowa.

Buchanan County meets quarterly with a dinner meeting and the interest has been uniformly good. They were very definite in the stand taken, backing up the Legislative Committee in the work they were doing toward a Medical Practice Act. The members, who are also members of the hospital staff, meet monthly as a staff, where matters pertaining to practice are frequently the subject for discussion.

Black Hawk County has held four quarterly meetings where all the business of the society has been transacted. There are also two active city societies in the county. Since all members of these organizations are also members of the County Society, matters pertaining to medical practice are well cared for.

Hardin County has held bi-monthly meetings during the year, the meetings being held in the different towns of the county with six o'clock dinners and program. They also held a joint meeting with the Hardin County Dental Society which was reported as a profitable affair.

Bremer County has held but one meeting, that a joint meeting with Butler County to consider legislative matters, a report of which was forwarded some time ago. This society also meets as a hospital staff where matters concerning the county organization are discussed.

Butler County meets irregularly and the report shows that not an active interest is taken in the affairs of the county organization.

Efforts were made to get a line on the work in Franklin and Wright Counties without result, so nothing can be reported as to their activities, though it is the feeling of the Councilor that their interest has been uniformly good.

Fred F. Agnew, Councilor.

Fourth Councilor District

Dr. Paul E. Gardner, Councilor for the Fourth District, moved that his report be received as printed in the handbook. The motion was duly seconded and carried.

House of Delegates, Iowa State Medical Society:

All of my ten counties have been reasonably active all year, with the exception of one. I made a personal visit to a meeting of the latter county. This meeting was held to elect a new president and secretary, the former secretary having moved from the community. From all reports, they are now functioning very satisfactorily.

There have been several heart and lung clinics in our district during the past year. They have all been very successful.

I wish to thank each of my deputy councilors for their kind assistance during the past year.

Paul E. Gardner, Councilor.

Fifth Councilor District

Dr. Aaron C. Conaway, Councilor for the Fifth District, moved that his report be received as printed in the handbook. The motion was duly seconded and carried.

House of Delegates, Iowa State Medical Society:

The Councilor for the Fifth District submits to you the following report showing the activities of the district for the year 1930. The Councilor reports that he has made nine addresses to P. T. A.'s with five engagements yet to be filled.

Dr. R. S. Grossman, Deputy Councilor for Marshall County, reports great activity as usual on the part of the Marshall County Medical Society. Programs of high rank throughout the year, besides speakers from our own number, made our meetings most interesting. The speakers from away were: Dr. Henry Schmidt, Chicago; Dr. Wm. Jepson, Sioux City; Dr. W. A. Rolfe, Waverly; Dr. H. C. Habein and Dr. V. S. Counseller of Mayo Clinic. The society also entertained the Iowa State Medical Society in one of the most outstanding meetings of its history.

The number of physicians eligible in the society is 43 and the membership is 100 per cent.

The society continues its contract with the Board of Supervisors for the care of indigents.

Dr. A. A. Pace, Deputy Councilor for Tama County, reports through his secretary, Dr. A. J. Farnham, that the Tama County Society has been rather inactive for a year, but one meeting being held at which Dr. W. C. Wagner was elected President and Dr. A. J. Farnham, Secretary. The total number of physicians eligible is 26 with 23 belonging. The County Society has no arrangement with the Board of Supervisors for the care of indigents.

Dr. M. H. Thielen, Deputy Councilor for Grundy County, reports three meetings held, a heart and chest clinic in October. One hundred per cent in membership in society. The doctors are very active in attending other county and district meetings. The officers for 1931, Dr. E. A. Crouse, Grundy Center, President; Dr. Bartruff, Reinbeck, Secretary and Treasurer; Dr. Gould of Conrad, Delegate.

Dr. J. E. Luckey, Deputy Councilor for Benton County, reports: Because of easy access to Waterloo and Cedar Rapids the members of our society prefer to attend those meetings rather than at home where the facilities are so limited that little can be offered of scientific interest. The Benton County

Society held a meeting on January 3, 1931, at the Virginia Gay Hospital in Vinton and two members were elected: Dr. Wm. R. Langford of Vinton and Dr. John R. Crum of Shellsburg. At our next meeting in May we will hold a clinic. During the year Dr. J. P. Whitney died and Dr. Corbin of Norway moved out of the county. We have 16 members paid up for 1931.

Dr. T. M. Redmond, Deputy Councilor for Jones County Medical Society, reports that no scientific meetings were held during the year, the profession attending the Linn County scientific meetings to which they were invited once a month. Only one meeting was held and that for business purposes and election of offices. No society activities or arrangement with Board of Supervisors for County indigents.

Dr. L. M. Downing, Deputy Councilor for Linn County, reports the usual activity on the part of his society. Excellent meetings with good programs including Dr. S. F. Haines, Rochester; Dr. C. A. Aldrich, Winnetka, Ill.; Dr. Logan Clendenning, Kansas City; Dr. Leda J. Stacy, Rochester, Minn.; Dr. W. H. Cole, Rochester, Minn.; Dr. H. O. McPeters, Rochester; Dr. J. B. Potts and A. D. Dunn, Omaha, and Dr. Fred Smith, Iowa City. The membership is 97 members. The Linn County Society has an understanding with the supervisors whereby a definite scale of fees is established and members who wish to do this work are called in rotation. Indigent cases to be sent to Iowa City are referred to the County Society and referred by the secretary to the members who wish to examine them. The physician receives $1,00 and the society $4.00.

Dr. E. J. VanMeter, Deputy Councilor for Cedar County, reports that their membership numbers 90%; that no meetings were held during the year; that everything has been peaceful with no controversies. Special notice was taken of the proposed state legislation and individual action on the part of the membership was taken as requested.

Aaron C. Conaway, Councilor.

Sixth Councilor District

Dr. Gray moved that his report as printed in the handbook be received. Motion seconded and carried.

House of Delegates, Iowa State Medical Society:

I have reports from all the counties except Davis, mostly from both the Secretary and the Deputy Councilor. A very favorable report came from all.

The general interest in organized medicine has been increasing.

The membership has kept much the same, with eight new physicians added to the district. The income of the physicians has somewhat decreased from 1929, but the societies are in excellent condition.

The practice of medicine has been good and the physicians have done well financially. All the societies are well organized and have had some special activities.

The people of the counties, both pay and indigent, are adequately cared for.

The medical care of the poor is not very satisfactory to the physicians in a few counties.

In only one county was there a report that the condition of the society was fair, all the others were good.

Organized medicine in this district seems to be very harmonious, none of the societies have any medical problem.

There is a strong sentiment against raising the dues of the Iowa State Medical Society, and a general expression that the expenses should be cut down to the income.

A problem has come up and considerable activity displayed between certain physicians of Monroe county, and the officers of the Iowa State Medical Society, relative to their membership into the Iowa State Medical Society. The Monroe County Medical Society has not been consulted by the state officers, nor any investigation made by them through the county Society; so this Society has had no part in this controversy. The Councilor of this district has at no time been appealed to in this matter by the physicians involved, by the Iowa State Medical Society nor by the Monroe County Medical Society to render a decision relative to it.

This matter has been temporarily settled by the secretary of the Iowa State Medical Society accepting dues direct to his office from these physicians.

S. T. Gray, Councilor.

Dr. Gray further added that he wished to call the attention of the House of Delegates to the last paragraph of his report.

The Chairman ruled that such a discussion should come under New Business, after the House had gone through the formality of receiving the various reports.

Seventh Councilor District

Dr. John H. Peck, Councilor for the Seventh District, was absent. Upon motion duly made, seconded and carried, his report as printed in the handbook was received.

House of Delegates, Iowa State Medical Society:

The Seventh Councilor District contains almost an exact one-seventh of the membership of the Iowa State Medical Society. A far more important fact is that there are less than 20 eligible non-members in the six counties comprising this district. This is a splendid record of organization and a striking illustration of the prevailing interest in scientific medicine. There are 71 incorporated municipalities in the district; 47 of these towns and cities have one or more licensed physicians and 24 have none; 15 of these towns have been abandoned during the past year or two as a profitable field for medical practice. Of course improved roads and more rapid means of transportation and communication have been important factors in this changing distribution of medical service, but the people of many small towns feel keenly the loss of a local family physician. A critical inquiry into this situation on the part of the State Society might reveal a remedial condition to the mu-

tual advantage of the profession and the public.

Special attention is directed to the following reports of the Deputy Councilors from the various counties of the district.

DALLAS COUNTY: Deputy Councilor George Elvidge reports that the past year has not brought many changes to the Dallas-Guthrie County Medical Society. The membership remains about the same, not entirely 100 per cent of the physicians are members but nearly so. One or two physicians will not join the society nor participate in the programs, not because they are antagonistic to the society, but they are the type that are not active in any organization. There seems to be no practicable way of getting them into the society. The scientific programs have been uniformly good and the attendance, as usual, has been excellent. The Councilor is still much in favor of their society, believing that one strong two-county society is much better than two ordinary societies. The officers are reliable, they work well together to arrange interesting programs which are held regularly every quarter.

MADISON COUNTY: Deputy Councilor C. B. Hickenlooper reports that they have not been holding regular meetings but that at the meeting on April 6th, the society voted to hold a meeting each month excepting July and August. There are 14 active physicians in the county, 11 of whom are members of the County Society, or 78 per cent. An interesting chest clinic was held last year.

MARION COUNTY: Deputy Councilor C. S. Cornell reports that seven meetings were held during the past year, with good interest and excellent attendance. One especially interesting meeting was held as guests of the United States Veterans Bureau Medical Society. There are no eligible non-members in the county, which gives them a rank of 100 per cent in membership. This very progressive society has had a satisfactory county contract for the care of the indigent sick since 1923 and is now considering organization of a county health unit. The members have taken an active part in legislative matters.

POLK COUNTY: Deputy Councilor H. J. McCoy reports that scientific meetings have been held regularly each month except July and August. The subjects were usually well presented and elicited generous discussion. One outstanding meeting was held in September with Dr. Jaffe of Chicago as guest speaker. The Iowa Tuberculosis Association presented Dr. J. Arthur Myers of Minneapolis at a special meeting in October on the subject of "Tuberculosis Among Children," which was very well received Exchange speakers with Black Hawk County Medical Society in January were Drs. T. F. Thornton and J. L. Kestel, who gave a most interesting program. The attendance at regular meetings is too low, averaging about 30 per cent, which is a fair criterion of the interest of the membership in the meetings of the society. The annual meeting in December with a buffet luncheon brought out a good crowd. Of the 270 licensed physicians in Polk County, 237 are members of the society with about 11 eligible non-members. The post-graduate extension courses put on by the College of Medicine of the State University were very successful and proved that the general practitioners desire this form of instruction. Many of our members have contributed to county society programs in other counties. The Ophthalmology-Oto-Laryngology Society has recentlty become a special section of the County Society, holding meetings monthly and continuing as a self-governing body. There has been some discussion regarding a standard fee bill and a county contract but no definite action has been taken.

STORY COUNTY: Deputy Councilor E. B. Bush reports that the system inaugurated some years ago of holding joint meetings with the Boone County Society has continued to be very satisfactory; bimonthly meetings are held with good attendance and very interesting programs, usually by local talent. The extremely friendly fraternal relations with an adjoining county society is worthy of imitation by other counties. The membership of the County Society is practically 100 per cent of the eligible physicians. Members have responded in fine shape to the calls of the state legislative committee, giving time and effort when needed. Medical organization in this county is in excellent condition.

WARREN COUNTY: Deputy Councilor Ernest E. Shaw reports only the annual meeting is held regularly with an occasional scientific meeting, but that Warren County physicians frequently attend the scientific programs of the Polk County Society. There are 17 active physicians in the county, 16 of whom are regarded as eligible for society membership; 11 of these belong in Warren County, one in Polk County, one in Clarke County, leaving a membership of 81 per cent, and the non-members are elderly practitioners. Several heart and lung and preschool clinics have been held in the county with excellent interest and good attendance. Some of the members feel that proximity to Des Moines with their frequent and interesting meetings precludes a very active society in Warren County. Attention to legislative matters has been well cared for.

John H. Peck, Councilor.

Eighth Councilor District

Dr. James G. Macrae, Councilor for the Eighth District, moved that his report, as printed in the handbook, be received. The motion was duly seconded and carried.

House of Delegates, Iowa State Medical Society:

The counties of the Eighth District for the major part report but one meeting a year. There appears to be no special reason for this lack of activity except want of proper stimuli within the counties themselves.

Decatur County, however, reports four meetings during the year, using both local and outside talent.

Clarke County reports five meetings using mostly local talent.

Page County reports meetings every other month but with rather poor attendance.

Union County holds regular meetings on the first Wednesday of every month with very good attendance, for the most part local talent.

There appears to be more, than ever before, attendance at the larger clinical meetings. No complaints have been filed with the Councilor during the year.

James G. McCrae, Councilor.

Ninth Councilor District

Dr. A. V. Hennessy, Councilor for the Ninth District, moved that his report as printed in the handbook be received. The motion was duly seconded and carried.

House of Delegates, Iowa State Medical Society:

All county medical societies comprising this district have held regular and special meetings at which scientific and business matters were discussed. Some of the counties, in addition to scientific papers, held clinics, the talent for which was supplied by members of the various local societies and a number of visiting physicians and surgeons.

Particular attention has been given to the discussion and recommendation with reference to matters before the recent session of the state legislature.

One county—Pottawattamie—through the Council Bluffs City Medical Society, having nearly the same membership as the County Society has contracted for the care of the county patients. The so-called Wapello County system of regulating the examination and referring patients to the State University Hospital has been discussed and referred to a committee for study. The county contract for care of the poor has been in operation since May of 1930 and has proven very satisfactory to all concerned. It is now in the process of renewal.

A. V. Hennessy, Councilor.

Tenth Councilor District

Dr. W. W. Beam, Councilor for the Tenth District, moved that his report, as printed in the handbook, be received. The motion was duly seconded and carried.

House of Delegates, Iowa State Medical Society:

I am pleased to be able to make the following report of the County Medical Societies, and the condition of the medical profession in general in the Tenth District, which is composed of 13 medical societies:

The Hancock-Winnebago, is one society, which is in a very strong working condition with Dr. August J. Peterson, Secretary, of Forest City, and 20 paid-up members and only two non-members in the two counties, held four meetings last year and is much interested in organized medicine.

The Boone County Medical Society is at present incorporated and has had ten meetings during 1930, number of members, 21; loss by death, 1; new members, 2; number in county eligible but non-members none, which classifies Boone County Medical Society 100 per cent, meetings are always well attended and much interest shown by all, very harmonious.

The Greene County Medical Society has 16 members, paid up with three non-members that are eligible. Society is in good condition and keeps well posted on problems of organized medicine, met only twice during 1930, but have a fine program outlined for the coming year and will undoubtedly make a good showing.

The Carroll County Medical Society is running smoothly and is very active, its financial status is good, its social life adequate and its scientific programs ample, members paid dues to 1932, 23; physicians in county non-members, 1; number meetings last year, 4 scientific and 1 political.

The Crawford County Medical Society has made much advancement in the last year—now has only three eligible members in county non-members, last year they had five non-members. The society has had numerous meetings and a public meeting April 2, 1931, with distinguished doctors from Omaha and elsewhere present. Just now they are attempting to organize several adjoining counties into a district medical society. In this county I can report much and strong advancement since my last report.

The Calhoun County Medical Society has 23 active members, had eight meetings last year with cordial good feeling among the members. This society has been strong in work done along lines of lay education. The new idea of having a postgraduate lecture course supplied by the Speakers Bureau is under trial this year, two meetings have been held and well attended. It is always safe to say Calhoun County Medical Society is 100 per cent proof.

The Webster County Medical Society is composed of 45 members of the society and four non-members. During 1930 there were 10 meetings of the society, in December there was started a post-graduate course under the auspices of the Speakers Bureau and the State University. This was well attended and very well worth while and they hope to have more of these meetings in the near future.

The Hamilton County Medical Society, we are more than pleased to say that now the society has 100 per cent membership of doctors in the county, had two meetings in 1930, but are expecting to have monthly meetings in 1931 to be held in the New Hamilton County Hospital. We have seen a marked improvement in organized medicine in the past two or three years under the secretaryship of Dr. M. B. Galloway.

The Humboldt County Medical Society. While Humboldt County has 12 physicians, only four are members of that society. This is explained by the fact that eight physicians are located in towns just at the edge of the county, Gilmore on the west, Livermore, Bode and Ottosen on the north and hold membership in an adjoining County Medical Society. However, all are active and much interested in medical advancement and has been manifested April 10th, at the Chest and Heart Clinic, at Ottosen, which was well attended.

The Pocahontas County Medical Society has a membership of 18 paid-up members, which makes it 100 per cent. They held nine meetings in 1930, conditions are all good, much interest shown on lines of sanitation, immunization and education of lay public through the Speakers Bureau.

The Palo County Medical Society has a membership of 10 and only two in the county not members, one of them just recently came into the county. They have had nine meetings in the past year, all of great interest, general conditions very good, harmony prevails and there is a splendid feeling of good fellowship.

The Emmet County Medical Society consists of 12 paid-up members and no physicians in the county eligible who are not members. During the past year they have had several special meetings. While all of its members are interested in organized medicine, there has been a lack of complete harmony at all times, but we are led to believe that these differences are fast disappearing and much improvement shown since my last report.

The Kossuth County Medical Society has 18 members, of which 14 are paid up and in good standing. During the past year they have received two new members, Dr. R. L. Williams and Dr. R. L. Corbin. During the year 1930 they have had very good meetings at which scientific papers were presented by men from outside the county. They expect to have a scientific program about May 1st, and the society has voted to hold a chest clinic in conjunction with the State Tuberculosis Association sometimes later in the summer. The society is very active and good fellowship exists.

I am proud to say that professional status in the Tenth District is in a very active working condition. Every County Society is self-reliant and cognizant of the fact that the lay public are demanding of every local medical society advice and council from the public health, sanitation and immunization standpoint and fully realize they can give the best service, the better able to serve the community needs if united effort is put forward, good fellowship and a hearty cooperation exists; and I can say that all this exists at this time in all the County Societies in the Tenth District.

W. W. Beam, Councilor.

Eleventh Councilor District

Dr. William Jepson, Councilor for the Eleventh District, read the following report:

House of Delegates, Iowa State Medical Society:

At the outset, I must state that I have been derelict in my duty, in that I have not found it possible to visit each County Medical Society during the year, as required, due to the fact that I have not always received notice of their meetings, which was, in turn no doubt, due to the fact that I did not make a formal request for said notices.

However, I believe that I have a fair knowledge of the activities in this district, since the Deputy Councilors, as well as the Presidents and Secretaries of the various county societies, upon invitation met in this city in January and considered the problems of our profession in this district.

There were thirty-one in attendance and a very active interest was shown by all present, in matters of importance to the profession of this District and of the State. It was the decision of those present that the conference was very profitable, which was particularly manifested through the fact that they voted to have such a conference annually.

It is believed that the physicians of this district are deeply conscious of their obligations to their coworkers in the field, to the profession as a whole, and to the public whom they are serving.

Dr. Jepson moved that the report be received. Motion seconded and carried.

REPORT OF THE BOARD OF TRUSTEES

Dr. Gordon F. Harkness, Davenport, presented the report of the Trustees:

House of Delegates, Iowa State Medical Society:

In times of depression fiscal reports are never pleasant to listen to. In reviewing the past year, your Board of Trustees has felt that the expenditures of your society should be brought to the attention of the House of Delegates in perhaps a slightly different manner from the custom in the past.

First, the Board of Trustees is simply an agent acting for the House of Delegates in the interim between meetings. If the House of Delegates by record vote directs certain activities to be carried on, the Board of Trustees can only accept such mandates from this legislative body and spend the money necessary for such activities to the best of their ability. It is not the province or the right of the Board of Trustees to act in any way, but in accordance with the wishes of the House of Delegates. Moral support is one thing, and financial support an entirely different thing. The first rarely amounts to much and the second, unless entered into with a realization of the financial responsibility involved may fail to obtain its objective or be the object of later criticism by the very ones who gave birth to this or that procedure.

So as a first premise, your Board of Trustees would urge that the House of Delegates when voting for certain activities on the part of the society should weigh carefully any financial obligations that are to be assumed. The program of activities to be undertaken varies from year to year. Some are to be anticipated each year. Some are a necessary part of the very existence of our society. Others arise unexpectedly, but become issues that have to be met without delay. Due to the wisdom, frugality and careful expenditure of funds there has been accumulated in the treasury of our society what we may call a reserve fund, which at the present time amounts to approximately $25,000, the annual interest from which is approximately $1,000. Your present Board of Trustees is of the opinion that there is no particular need of ac-

cumulating a large reserve fund beyond the $25,000 which we have at the present time. Neither is your Board of Trustees of the opinion that the principal of this reserve fund should be drawn upon except under the most extraordinary circumstances. The income from it is, however, in our opinion, available for extra expenditures that have not been anticipated.

Anticipated activities of our society must be met by the annual income received from our members. Otherwise we are not financially sound.

The Administrative Account

Your board feels that the activities of the society have improved, their scope has been enlarged, and the entire society made more virile since the employment of a managing director. The salary of the director is the largest item in the administrative account. This does not mean that his activities have been confined to those of administration. During the past year his time has roughly been divided as follows: Legislative, 30 per cent; Journal, 20 per cent; Special Committees, 20 per cent; Business, 10 per cent; County Society Service, 20 per cent. Yet since he has primarily been engaged to oversee the administrative work and secondly, to correlate and aid other activities, we have not seen fit to charge any special activity with any pro rata share of his salary. The administrative work requires additional clerical help, the running of an office with the many incidental items pertaining thereto. During the past year the administrative department has been charged with $13,362.63.

The JOURNAL which has shown such marked improvement is the foremost among the necessary and anticipated society activities. This account which includes the editor's salary, additional clerical help, printing of the JOURNAL, etc., amounts to $10,874.93. Revenues received because of the JOURNAL including advertising, reprints, subscriptions and sales, amounts to $8,125.02, leaving a net cost of the JOURNAL to the society last year, of $2,749.91.

The standing committees form a part of the anticipated activities of the society. The expenses of their meetings naturally vary. The Legislative Committee has grown in its work. It is in a sense a political committee and anyone with a small experience soon learns that success in dealing with political bodies demands a legitimate expenditure of considerable sums of money. The Legislative Committee during the past year has been charged with approximately $2,800, and your Board of Trustees feels that this expenditure has not only been wise, but necessary. The Economics Committee is an important committee. The Committee on Medical Education and Hospitals has been one that has received special commendation for its work. The expense involved in this committee work and the publication of its findings probably reached a sum far beyond that anticipated by this body when the committee was organized. The expenditures for this committee and its work during the past year, which does not include its expenses during the preceding year, reached the sum of $2,539.26. The point that your Board of Trustees desires to impress upon this body is that unless advantage is taken of the data accumulated by this or any fact finding committee, and unless constructive recommendations are made and actual accomplishments attained by acting upon them, then the efforts of such committee members have been in vain and the expenditure of such money for their work has been wasted and is unwarranted.

We have, on the recommendation of this body at the last annual meeting, lent financial aid to one of our county units in its fight against quackery. We are on that account now involved in legal conflict. This will mean an expenditure of money in addition to that which has already been disbursed. The vote recommending this aid was made from the floor and carried without dissent and almost as nonchalantly as if it only meant moral and not financial aid. Your board has no apology to offer for having spent this money for this purpose in the way it was done. As a society organization we had very little to say as to how it was to be spent. The conflict was on when we were called upon for aid and we could only contribute. This is not meant as any criticism of the county unit involved, but rather to impress on this body that before voting any considerable society funds your Board of Trustees feels a committee recommendation for the same should be received on the floor of this House and discussion then invited before definite action is taken. The amount expended for this purpose during the past year was $1,831.98. The Committee on Arrangements for the annual meeting is charged with the sum of $755.06. This was not as it should have been. Our annual meetings should practically pay for themselves. This was an expense inherited by your present Board of Trustees over which they had no control.

The Speakers Bureau Committee is a newer activity toward which your board looked with tightening purse strings. The consensus of opinion was that it was worth the trial, even to calling on our reserve fund. Fortunately, due to the fine cooperation from the medical department of the University, and secondly due to the willingness of the medical profession to contribute to the special postgraduate courses, there has been received a gross income of $3,159.04. There has been to date an expenditure of $1,692.01. This balance of $1,467.03 does not include the extra clerical help which to date amounts to $745.00, leaving a balance of $732.03. This will be exhausted during the summer months by clerical salaries during which time there will be no income. To summarize, the Speakers Bureau in its first year, has made a most remarkable record, and it is the recommendation of your Board of Trustees that the committee be continued in its work.

Financially we are not paying our own way at the present time. We have this year spent over $8,000 more than our income from dues and advertising, and are only keeping our current bills paid by spending the interest on the reserve and the income from the Speakers Bureau and by drawing on the

surplus in the revolving fund which was thus reduced to $6,000 in December, 1930. This is, of course, not as it should be. We have approximately 2,200 members, which means a revenue to the society of $16,500 annually. Your Board of Trustees has prepared a tentative budget which it will be necessary for us to adhere to if we are going to continue the present activities. This budget includes:

Administrative Expense	$13,500
Journal	4,000
Medico Legal	1,500
Legislative	1,500
Committees	1,200
Extra Committee Expense (Anticipated, but not known)	1,500
Extra allowance for extraordinary expenses not covered by interest from reserve fund	2,000
	$25,200

This makes a total of $25,200 of society expenditures that are to be met from members' dues. With 2,200 members this brings the necessary dues from each member to between $12.00 and $13.00, and it is the recommendation of your Board of Trustees that, in order to continue with our present activities, the dues to the State Society of necessity will have to be raised to $12.00 per year per member.

Oliver J. Fay, Chairman
Edward M. Myers,
Gordon F. Harkness,
Trustees.

Dr. Harkness then concluded with the following remarks:

The Treasurer's report is comprehensive and is divided into its various exhibits, but the Trustees would like to make it a little easier to understand, and perhaps not quite so nice to listen to. Let us divide it into three parts:

1. **The Bank Account.** A year ago we had $43,008.74 in Government Bonds and money. This May we still have the bonds, but we have a total of $37,926.89. This leaves a deficit of $5,081.85.

This is not a deficit from current income, but from all income. Included in that income is a profit of $1,467.03 from the Speakers Bureau, and also the income from bonds and our reserve cash fund of $1,322.24. Take these from our current income and we have a deficit of $7,871.12.

2. **Expenditures.** The Speakers Bureau, as stated above, shows a profit of $1,467.03, but not shown in the auditor's report is the fact that because of the Speakers Bureau we hired extra clerical help amounting to $745.00, charged to administrative expense and during the summer months when no income is being produced there will be approximately $700.00 more for the same purpose. The Speakers Bureau is therefore about breaking even, and can be disregarded in the budget.

The Journal. The tentative budget of the Trustees makes an allowance of $4,000.00 for the JOURNAL. Since these figures were compiled, there has been a return from advertising accounts which has reduced the JOURNAL deficit, so that the allowance as printed in the handbook is a little large.

The Legislative Committee. This year the cost of legislative work was $2,767.18. In the off-sessional year it is only a fraction of this amount. However, if we are to continue our legislative work along its present methods, the annual budget should provide for a biennial period, and as we are going now, it means $1,500 a year or $3,000 for each two-year period.

Committee on Medical Education and Hospitals. You will see from the handbook what the Committee on Medical Education and Hospitals cost. You have our comment on the same, that unless from this data constructive ideas develop which crystallize in actual accomplishments, then we believe such work is in vain, and the expense unwarranted. Enthusiastic committee work is a wonderful thing, but the financial expenditures for the same demand practical results.

Other committees are going to be created and before they involve the Society in too great an expenditure of money, you or your Board of Trustees should be made cognizant of their plans and thereby be able to keep some check on the probable expense to be incurred. We can from past experience gauge the ordinary committee expenses, but there will rightfully and justly develop some committees which will be entitled to a share of that part of the budget which should be set aside for extra committee expense.

3. **Fiscal Program.** It is not the sense of the Board of Trustees to build up a reserve of undue proportions, but it is good business to have a reserve that will take care of extraordinary expenses. May I call your attention to Chapter IX, Section 3, of the By-Laws:

> "All motions or resolutions appropriating money shall specify a definite amount, or so much thereof as may be necessary for the purpose indicated, and must be approved by the Board of Trustees before being presented for final action to the House of Delegates."

Like many By-Laws, it has been on the shelf and more or less forgotten, but the time has come to bring it off the shelf and dust off the accumulated cobwebs of unsound financing.

Dr. Harkness then moved that the report be received by the House of Delegates. The motion was seconded.

Dr. L. C. Howe, Muscatine, asked permission to call to the attention of the House a part of the Trustees' report which he considered unfair to the Muscatine County Medical Society. He stated that the Muscatine Society had urged the State Society to appoint a committee to carry on the fight against the Baker Institute; that the matter had been referred back to the Muscatine Society, with the promise that they would receive financial aid; that the only thing the committee did without the sanction of the Trustees was to send an attorney to Washington; that thereafter the Iowa and Illinois societies knew

the probable expense which would be incurred; that the report of the Trustees would lead the House to believe that the Muscatine Society spent $1,831.98 of the Society's money, which was not true, since at one time they received a check for $700.00, and at another time a like amount from the Illinois State Society, and later $1,400.00 from the A. M. A.

Dr. Fay then pointed out that it was necessary to violate a part of the Constitution in order to give the County Society any aid; that the Board of Trustees could go no further; that it was not a matter of the amount of money spent, but of the legality of its expenditure by the Board of Trustees.

The Chairman ruled that the discussion should be conducted under New Business after the formality of receiving all the reports.

Upon vote of the House, the previously seconded motion carried, and the report of the Trustees was received.

REPORT OF DELEGATES TO THE AMERICAN MEDICAL ASSOCIATION

Dr. William Jepson presented the following report:

There was very little of interest to the members of this Society that occurred in the meeting of the American Medical Association, except possibly the fact that the liquor question came to the fore again, with the result that the President of the American Medical Association was asked to read that part of his report at a separate session. It was simply a rehashing of what had taken place from time to time before.

However, there was one matter that came up that was possibly of interest, owing to the fact that it has already been referred to here by Dr. Howe. We were asked to put forth our effort to have the American Medical Association sponsor some activities which should look forward to curbing, if not entirely dispensing with the activities of the gentleman on the Mississippi River. You know to whom I refer. For some reason, at the first session the matter did not come up. I expected that our Secretary would be there to bring the matter before the House of Delegates, but the last session at which any resolutions might be brought before the House terminated without any such resolution being presented and all opportunity had actually passed. We had done nothing. The result was that Dr. Throckmorton and myself immediately placed ourselves in communication with the Councilors from Illinois. I think there were ten or eleven of them present and at the same time we were fortunate enough to get in contact with the President and Secretary and another member from Kansas, where they have had similar difficulties. We got them all together for dinner. The gentlemen from Illinois and from Kansas far exceeded the activities of our own members, although the latter were few in number. We were fortunate enough to get out on the floor and get the House of Delegates to listen to and accept our report. They put themselves on record as ready to do what they could to aid us in dispensing with the services of the gentleman in question. The American Medical Association putting itself into the fight has had something to do with bringing about as favorable conditions as we have at the present time.

Upon motion duly seconded and carried, the report of Dr. Jepson was received.

REPORT OF THE MANAGING DIRECTOR

In the absence of Mr. Blank, and upon motion being duly seconded and carried, the report of the Managing Director was received, as printed in the handbook.

House of Delegates, Iowa State Medical Society:

Since practically every activity of your Managing Director is carried on under the supervision and at the direction of some officer or committee of the society, it is not necessary to make an extended report. However, a considerable part of the time devoted to attendance at county medical society meetings cannot be definitely apportioned among the various committees and officers, and a constantly increasing number of services rendered through the state office to county societies and individual members are of a specialized nature which cannot be definitely allocated, so that a brief reference to these functions may be illuminating.

Due to the necessity of remaining almost constantly in Des Moines during the three months that the Legislature was in session, less traveling to attend county medical society meetings has been possible during the past year than in the preceding year, forty-seven trips having been made during 1930-31. Of these, fourteen were devoted to legislative matters, while twenty-six were entirely, and six more were in part, concerned with problems of medical economics and medical organization. Five trips were made in connection with the Medical Education and Hospitals Committee and five were to make addresses before lay organizations.

One of the principal specific services rendered county societies has been in connection with the care of the indigent sick. At the time of my report a year ago there were ten county medical societies in Iowa which had blanket contracts with the supervisors for the care of the indigent sick. This plan has had the approval of the Medical Economics Committee, and your Managing Director has always responded to calls from county societies to discuss this problem. During the past year five societies have completed contracts as follows: Council Bluffs Medical Society, Clinton County Medical Society, Muscatine Medical Society, Boone County Medical Society, and Wright County Medical Society. Each of these societies had services from the state office in connection with their contracts, as have also the following societies which are contemplating contracts: Woodbury County, Des Moines County, Carroll County, Floyd County, Chickasaw County, Clayton County, Tama County, Lucas County, Monroe County, Dallas-Guthrie Counties and Cass County.

An increasing amount of time is devoted to correspondence with county officers and members. This is due to the fact that in addition to routine corre-

spondence which can be handled with little expenditure of time, the state office is more and more given the opportunity to render real services through securing special data and information covering a wide range of subjects. Securing such information and material often involves considerable time on the part of the Managing Director or members of the office force, so that the time devoted to correspondence is increasing, even though the actual volume remains about the same. This feature, however, is a pleasing mark of services being given by the central office, is cheerfully rendered and all such inquiries and requests continue to be welcome.

This report cannot be complete without a reference to the outstanding fact in connection with the work and activities of the Iowa State Medical Society during 1930-31; that is, the increasing number of Iowa physicians who are enthusiastically and efficiently cooperating to advance the cause of organized medicine and to promote the highest interests of the profession. County and state officers and committee members have during the past twelve months set a new high record for sacrifice of time and marked achievements in strengthening the Iowa State Medical Society and realizing its objectives.

Respectfully submitted,

Vernon D. Blank,
Managing Director.

Report of Standing Committees

REPORT OF THE MEDICO-LEGAL COMMITTEE

Dr. Ely, Des Moines, called attention to the report as printed in the handbook.

House of Delegates, Iowa State Medical Society:

During the past year the Medico-legal Committee has had very little to do. This is a result of the large number of indemnity policies held by members of the society. Inasmuch as the various insurance companies which write policies providing for the defense of physicians against malpractice, contract to defend and indemnify the policyholders, it has been found unnecessary to spend the society's money for such defense.

Notwithstanding the fact that it seems wise for our society members to purchase commercial protection against damage suits, it must not be forgotten that there is an ethical and professional side to these medico-legal matters. It has been suggested by some members of the society that insurance companies are a little too apt to make settlements out of court without due consideration for the reputation of the defended physicians, and the effect which such easy settlements may have upon the legal fraternity. It is obvious that if every trumped up threat of damages is quieted with easy money, we will soon have our profession falling a prey to the prevailing racket system. On the whole, the medical profession has been treated very fairly by the courts, and the best class of lawyers seldom encourage damage suits against physicians, but from a purely commercial point of view, it is often easier for an indemnity company to slip a claimant a hundred dollars, to get rid of him, thus tacitly acknowledging the liability of the defendant when in all probability said defendant is wholly innocent of malpractice. Your committee asks your cooperation in bringing to its attention any instances in which settlements are made which do not seem to be justified. It is necessary, however, to sound a note of warning lest we of non-legal minds attempt to make decisions, concerning matters which only a legal mind is capable of comprehending. It is often far better to settle a damage suit out of court than to promote adverse publicity for the defendant, but this applies chiefly to instances in which the defendant has neglected his professional duties, or it can be made to appear that he has. The chief object of this comment is to stimulate the members of the State Medical Society to be on the alert lest our professional dignity be lowered by allowing ourselves to be the undefended victims of unjust threats. Your committee would advise that members insist on being consulted before allowing any settlement in any action or threatened action brought against them. Indemnity insurance is a professional necessity, but those who pay the premiums must retain some control of their ethical and professional destiny.

The statistical report from Mr. C. M. Dutcher, legal counsel for the society, is not available for publication at this time, but will be presented to the House of Delegates at the May meeting.

F. A. Ely, Chairman.

Dr. Ely then made the following additional report:

The yearly report of our legal counselor, Charles M. Dutcher, will be the item of main interest in this communication.

Without knowledge of the Medico-Legal Committee, the Committee on Medical Economics has recommended favorable consideration of group malpractice insurance by the Board of Trustees. The Medico-Legal Committee wishes to commend the interest and activities of the economics group, but feels that its recommendations with respect to group malpractice insurance should be most seriously considered by the House of Delegates before adoption. The reasons for this suggestion are as follows:

(1) During the time that our present system of medical defense has been in existence, judgments have been obtained against defendants in only fourteen instances.

(2) Our present system provides for defense only and does not involve the society in any way in matters of indemnity. This restriction, in the judgment of our committee, is expedient because it confines the activities of the society as an organization, quite strictly to the medico-legal phases of malpractice most intimately related to medical ethics and does not foster popular belief in the "Medical Trust."

(3) Our defense features are modest and inconspicuous, thus reducing to a minimum the prejudicial influences of group interests

when our members are obliged to appear as witnesses in court in the defense of brother practitioners.

(4) Inasmuch as our members, as individuals, are privileged to purchase commercial defense and liability policies, they can continue or discontinue the same at will without prejudicing the interests of the society as a whole, whereas group insurance, contracted for, might cause embarrassment in the event that such a contract be not renewed at a time when a goodly number of cases are pending. The idea being, that a discharged employee, even though obligated to complete unfinished work, might be an unfaithful and unwilling servant. We always have a number of malpractice cases which drag through the courts for years.

(5) If our society should be obliged to collect from its members, the increased dues which would make possible group insurance, some embarrassment might be occasioned by delinquencies. The society would be obliged to carry the risks and take its chances on collecting from delinquent members, or deprive them of protection.

These suggestions are offered for your enlightenment and with no thought of personal interest or prejudice.

The following is a synopsis of the yearly report of Attorney Charles M. Dutcher, legal counsel for the society:

"Annual Report of Malpractice Cases for Year Ending April 25, 1931."

"To the Iowa State Medical Society:

"We are submitting herewith our Annual Report of malpractice cases for the year ending April 25, 1931. The report includes all cases brought against members of the society irrespective of whether they have indemnity or not, so far as the same have been reported to us.

"During the year there have been sixteen new cases commenced, twenty-seven cases disposed of, leaving twenty-four cases now pending.

"Of the twenty-four cases now pending, seven defendants have no indemnity and are being defended at the expense of the society. Four of these cases have been begun during the year; three of the cases pending were pending at the date of the arrangement between the Medical Protective Company and the State Medical Society, whereby one-half of the expense of the defense was to be paid by the State Medical Society and one-half by the Medical Protective Company.

"We desire to express our appreciation of the assistance which has been rendered to us in our work by the Medical Defense Committee.

"During the year several cases have been threatened but not begun.

"Since the organization of the Medical Defense Committee of the State Medical Society, three hundred thirty cases have been begun against members of the society and three hundred twenty-five cases have been disposed of. The discrepancy between the number of cases commenced and disposed of and the number now pending is accounted for by the fact that, in a large number of cases, at the time of the reports there had been judgments in the lower court or dismissals and the cases were subsequently appealed or commenced over again and were again reported as cases commenced.

"The total amount claimed in damages to date is $4,223,005.85; fourteen judgments have been obtained against members, aggregating $62,244.35.

"Respectfully submitted.
"Dutcher, Walker & Ries."

Dr. Ely further remarked:

In talking with the other two members of the committee, it seemed to be the consensus of opinion that inasmuch as we have proceeded in such an inconspicuous manner and the practice of our defense provisions has been so successful, we feel that it would be a doubtful experiment to take on anything, hoping that it might be better, when the thing that is in operation is doing very well. In other words, it is like giving medicine to a well person.

I have personally consulted three attorneys with respect to the matter of group insurance, as to whether it would be prejudicial in court, and all three of them, two of whom were totally disinterested, told me that they felt that it would invalidate the testimony of a physician who might appear as a witness for the defense, in that it would show that he was financially involved in the same organization as the individual whose testimony he was giving for the purpose of defense.

The more personal and the less group you make the defense proposition, the stronger we are in court.

In two or three instances in which it was perfectly obvious that the defendant would be stuck for damages, our attorney has been able to talk with the attorney on the other side and say, "We know that we are going to pay you something. Let this case go by default and we will settle with you." This has a good psychological effect on the public. There are some instances in which judgments would not have been rendered had this procedure not been followed. In this, as in everything, the psychological element in our dealing with the public is very important and your committee's one great argument against group insurance is that it will get publicity and be vaunted in courts.

Dr. Ely moved that the report be received, and the motion was duly seconded and carried.

Dr. Marker then asked Dr. Ely what the question was that he had put to the attorneys as to the effect of group insurance.

The Chairman ruled that the discussion was out of order and should properly come under New Business.

The Secretary then rose to a point of personal privilege, stating that he had been invited to speak before the Iowa State Pharmaceutical Association at its meeting in February, and because of that courtesy

he had invited that Association to send a delegation to the meeting of the Iowa State Medical Society. He further stated that three of their delegates were present and that he would like to give Mr. George Judisch, of Ames, five minutes to present any subject of interest to the two professions.

Mr. Judisch then made the following remarks:

Dr. Parker has explained the circumstances under which we are present. The doctor asked us to appoint a committee to attend this meeting of the House of Delegates and promised us that he would use his best efforts to have a committee of the Iowa State Medical Society attend our meeting. We had a committee meeting, and did not know what our medical friends wished, but we agreed that we would gladly aid and support you in every effort to develop higher ideals of legitimate medicine. I asked Dr. Parker what he had in mind and he wanted to know what we want to do. We had a hasty committee meeting after our little conversation and this is simply a suggestion:

I believe it is worth thinking about. We suggest that we coordinate the legislative efforts of the Iowa State Medical Society, the Iowa Pharmaceutical Association, the Iowa Dental Society and the Iowa Association of Veterinarians, with the distinct understanding that none of these bodies is to offer more than two bills at any legislative session and then when we put the entire power of the physicians, pharmacists, dentists and veterinarians behind all of those bills, I believe we will have very little difficulty in securing our ends, if we exercise a reasonable degree of intelligence in framing the bills, and support them with the loyalty that we should. There should be the distinct understanding, of course, that each body contribute toward the expense. I do not know whether our association would agree to that or not. We just finished a legislative session and unfortunately, I have been Chairman of the Legislative Committee for some fourteen years. This has been a very expensive year. We had three major bills and some more appropriations. Our total expense this year was $293.75.

Another suggestion that I should like to make is that the Iowa Pharmaceutical Association be privileged to exhibit the national formulary and U. S. P. preparations at your meeting, with one or two men present who are capable of explaining them. I mean to treat you respectfully, but the practice of medicine is getting away from us and too many proprietary products are being prescribed and used at unnecessary expense to the people who are ill and therefore unfortunate. I am willing to argue this question with anyone who wishes to take it up.

We are willing to receive any suggestions you have and will support you in any effort to develop higher ideals of legitimate medicine. I thank you for your attention.

The Chairman thanked Mr. Judisch on behalf of the House of Delegates.

REPORT OF COMMITTEE ON PUBLIC POLICY AND LEGISLATION

Dr. Thos. A. Burcham, Des Moines, called attention to the report as printed in the handbook: House of Delegates, Iowa State Medical Society:

MR. PRESIDENT: Below you will find a list of bills introduced during the Forty-fourth General Assembly in which the medical profession were particularly interested. The disposition of each bill is shown.

H. F. 25 (S. F. 56) Elliott. Coroners—duties and fees.
Feb. 19—S. F. 56 substituted. H. J. 580. Failed

H. F. 29 McLain. To include "podiatry" in list of recognized physicians.
Feb. 20—Withdrawn by author. H. J. 603.

H. F. 30 McLain. Podiatry permit for alcohol.
March 20—Committee recommended passage. S. J. 812. Lost in Senate sifting committee.

H. F. 31 McLain. Podiatrist—definition of.
Feb. 10—withdrawn by author. H. J. 394.

H. F. 32 (S. F. 89) Whiting. Embalming—license and regulation.
Feb. 24—Companion bill indefinitely postponed in Senate. S. J. 521.

H. F. 129 Long. Venereal disease—State Board of Health—duties and authority.
April 3—Reported out by Senate sifting committee. Approved by Governor April 10. Effective July 4, 1931.

H. F. 131 Long. Local Board of Health—duties of health officers.
April 3—Reported out by Senate sifting committee. Approved by Governor April 9. Effective July 4, 1931.

H. F. 140 Wearin. Barbers—temporary registration of out-of-state barbers.
Feb. 20—Committee recommended amendment and passage. H. J. 593. Failed.

H. F. 147 Long. Communicable diseases—definition of "isolation."
April 3—Reported out by Senate sifting committee. Approved by Governor April 9. Effective July 4, 1931.

H. F. 174 (S.F. 110) Forsling. Osteopathy.
April 2—Referred to sifting committee. H. J. 1345. Lost in House sifting committee.

H. F. 178 (S. F. 49) Forsling. Barbers apprentices—educational qualifications and other regulations.
Feb. 24—S. F. 49 substituted. H. J. 699. Failed.

H. F. 190 Long. Board of Health—providing for an assistant inspector.
April 1—Signed by Governor. H. J. 1331. Effective July 4, 1931.

H. F. 223 Committee on Public Health. Medicine and surgery—definition broadened: "to prescribe or prescribe and furnish medicine" made a test of medical practice.
April 2—Signed by Governor. H. J. 1353. Effective July 4, 1931.

H. F. 224 Committee on Public Health. Medicine and surgery—renewal of licenses.
Feb. 11—Amendment filed. H. J. 423. Failed.

H. F. 225 Committee on Public Health. Medicine and surgery—use of professional titles.
March 20—Approved by Governor March 19. H. J. 1044. Effective July 4, 1931.

H. F. 259 Johnson of Marion. Dentists license—accepting certificate of U. S. dental examiners.
Feb. 27—Committee recommended passage. H. J. 772. Signed by Governor. Effective July 4, 1931.

H. F. 260 Recd. Garages (public)—equipped with ventilators to carry off monoxide gases.
Feb. 27—Committee recommended amendment and passage. H. J. 772. Lost in House sifting committee.

H. F. 308 Helgason. Sterilization—creation of state board of eugenics. Powers and duties—appropriations.
April 1—To House sifting committee. Lost.

H. F. 327 (S.F. 130) Finnern. Marriage licenses—increasing fees—creation of vital statistics fund.
April 1—To House sifting committee. Lost.

H. F. 332 Ellsworth. Local boards of health—meeting time.
March 27—Committee recommended indefinite postponement. S. J. 972. Lost in Senate sifting committee.

H. F. 340 Hollingsworth, Whiting and Torgeson. Osteopathy—practice of—redefined license requirements.
April 2—Referred to sifting committee. H. J. 1345. Lost.

H. F. 362 (S.F. 245) Lichty. Plumbing—board of examiners—how appointed.
March 27—Committee recommended passage. H. J. 1182.
April 15—S. F. 245 substituted.

H. F. 413 Gallagher. Swimming pools—inspection by state board of health.
March 27—Committee recommended passage. H. J. 1181. Failed.

H. F. 450 Dayton. Nurses training hospitals—minimum average of 20 patients.
April 1—To House sifting committee. Lost in Senate sifting committee.

H. F. 485 Brown. Sterilization of inmates of state institutions.
March 28—Amendments filed. H. J. 1279. Replaced by H. F. 578.

H. F. 490 Osborn. Suggestive therapeutics—license and regulation.
March 27—Committee recommended indefinite postponement. H. J. 1181. Lost in House sifting committee.

H. F. 560 Committee on Public Health. Dead bodies—burial or removal permits issued only to registered embalmers.
April 2—Introduced, passed on file. H. J. 1337. Lost in House sifting committee.

S. F. 44 (H. F. 58) Clearman. Integration of state psychopathic and general hospitals (Iowa City).
March 23—Approved by Governor. S. J. 853. Effective July 4, 1931.

S. F. 49 (H.F. 178) Stoddard. Barber apprentices—education qualifications and other other regulations.
March 17—Approved by Governor March 16. S. J. 773. Effective upon publication.

S. F. 56 (H. F. 25) Wenner. Coroners—duties and fees.
March 10—Approved by Governor March 2. H. J. 643. Effective July 4, 1931.

S. F. 67 Gunderson. Doctor's report of suspicious accident cases.
March 13—Committee recommended passage. H. J. 890. Approved by Governor April 8. Effective July 4, 1931.

S. F. 89 (H. F. 32) Stanley. Embalming—license and regulation.
Feb. 24—Indefinitely postponed. S. J. 521. Failed.

S. F. 110 (H.F. 174) Ickis. Osteopathy—student regulations.
March 30—To Senate sifting committee. Lost.

S. F. 130 (H.F. 327) Carden. Marriage license—increasing fees—creation of vital statistics fund.
March 13—Committee recommended indefinite postponement. H. F. 890. Lost in Senate sifting committee.

S. F. 162 (H.F. 154) Hill. Creating a sanitary water board.
March 17—Amendment filed. H. J. 993. Lost in House sifting committee.

S. F. 334 Kimberly. Appropriation—full time county health units.
March 30—To Senate sifting committee. Lost.

S. F. 336 Cooney, Kimberly and Bennett. Optometry—additional regulations.
March 30—To Senate sifting committee. Lost.

S. F. 370 Committee on Public Health. Juvenile court—judges, probation officers, procedure and redefining neglected, dependent and delinquent children.
April 1—To House sifting committee. April 9, amendment filed. Failed.

S. F. 392 Committee on Public Health. Podiatry—three-year course.
March 30—To Senate sifting committee. Lost in House sifting committee.

S. F. 393 Committee on Public Health. Podiatry—change in definition.
March 30—To Senate sifting committee. Lost.

Eight of the numerous bills affecting public health which were introduced in the Forty-fourth General Assembly were of special interest to the medical profession. Four of them had to do with the Department of Health and four of them were of special interest to the practitioner of medicine. Of the four measures having to do with official public health affairs, three passed and one failed.

The public health measure which failed was Senate File No. 130 providing for important additional activities in the Department of Vital Statistics, such work to be financed by an increase of the marriage license fee, which was to be remitted to the Bureau of Vital Statistics in the Department of Health. The disposition of the past legislature to cut down taxes of all kinds was probably a factor in the failure of this measure.

House File No. 129, which passed, changes the methods of reporting venereal disease cases. Such reports will in the future be made direct to the Department of Health so that such patients' names are not disclosed locally by the attending physician. It is important that every member of the Society should be fully informed on Section 6 of that bill which reads as follows: "Failure to report any venereal disease as specified in this chapter shall be cause for refusal of a renewal of a license as provided in Title VIII, Chapter 115, Section 2447 of the Code of 1927."

House File No. 131 was enacted into a law and will change the status of the local health officer in relation to the local Board of Health. Formerly the health officer was titled as "advisor" to the local Board of Health. The law as now amended makes him the "executive officer" of the local Board of Health.

House File No. 147, which has also become a law, provides that fumigation in quarantine cases is no longer necessary, relieves the local Board of Health of the necessity of notifying the State Department of Health of the termination of quarantine and properly defines "isolation," the latter being necessary because the Code had defined "isolation" as "detention in a hospital."

Acting upon the motion passed by the House of Delegates in the May, 1930, meeting that the Council might advise with the Committee on Public Policy and Legislation regarding a legislative program, the chairman of the Legislative Committee appeared before the Council at a meeting held in Des Moines on September 16. Careful consideration was given to the best method of regulating the practice of medicine in Iowa, three possibilities being considered: a basic science law; a single medical board; or a clarification of the present medical practice act. After extended discussion the Council advised the latter and a resolution which read as follows was passed:

"That the best solution at this time of the Medical Practice Act is to clarify and amplify the present practice act."

Acting upon this recommendation, the Committee on Public Policy and Legislation, on the approval of the Trustees, employed an attorney who prepared certain amendments necessary to clarify the practice act. Five amendments were prepared. One of these, however, had to do largely with public health duties of physicians and was not introduced. A second provided for revocation of licenses under certain circumstances and was not pushed vigorously because there seemed certain administrative difficulties which might be eliminated in other ways. The remaining bills plus the measure to provide an additional inspector in the Department of Health were bills in which this committee took an active interest throughout the session.

The four measures introduced in the Forty-fourth General Assembly which affected the practice of medicine were: House Files No. 190, No. 223, No. 225 and No. 340 (together with the osteopath's opposition bill, House File No. 174). The first three will become laws on July 4, 1931, while House File No. 340, together with the osteopath's bill, was killed in the House Sifting Committee.

House File No. 190 provides for an additional inspector, who will take up his duties July 1st of this year. Such a provision was necessary because, despite the energetic efforts and definite accomplish-

ments of the present inspector, Mr. Carlson, he still has over two hundred unattended cases on his docket.

House File No. 223 passed both Houses with little or no opposition and was signed by the Governor, the law to take effect July 4th. This amendment to the definition of what constitutes the practice of medicine should prove very helpful. Since the revision of the Code in 1924, one of the tests of practicing medicine has been to "prescribe and furnish" medicine. It was therefore necessary to prove that the person in question did both. House File No. 223 makes the law read as it originally did, and the test will henceforth be "to prescribe or to prescribe and furnish" medicine. This means that only licensed physicians have the right to prescribe or prescribe and furnish medicine and it is felt that this clarification of the law will be helpful to all non-medical practitioners, the law enforcement officers and the courts in fixing the clear line of demarcation between medical and non-medical practice.

House File No. 225, which was also passed, provides that licensed physicians, dentists, osteopaths, chiropractors, optometrists and podiatrists may use the title "doctor" before their names but must put their academic degree after their names, M.D., D.D., D.O., D.C., Opt., Podiatrist. The purpose of this measure is, of course, to protect the public so that any one will know exactly what sort of healing service will be secured when a "doctor" is called, but it should be clearly borne in mind that this requirement of the law that one's academic degree must follow his name, applies equally to physicians. Therefore, every member of the medical profession should make sure that wherever his name is used publicly, the letters "M.D." follow it. This provision is very important and should be immediately acted upon by every member of the State Society.

House File No. 340 had as its purpose a re-defining of osteopathic practice. This measure was lost by being kept in the House Sifting Committee. There were two principal provisions in this measure. One defined osteopathy as a drugless practice and the other provided that "osteopathic surgeons" must qualify for and pass the surgical examination of the Board of Medical Examiners. It will be noted that the first of these provisions was the corollary of House File No. 223 and would have further strengthened and clarified the distinction between the osteopathic and medical practice. The second provision would affect only a small number of osteopaths, since but 16 licenses to practice "osteopathic surgery" have been granted in the ten years that the Iowa law has made provision for such. Only eight of these "surgeons" are practicing in Iowa at this time.

A brief review of the fight in connection with House File No. 340 is necessary in order to understand the problems confronting your Legislative Committee during the Forty-fourth General Assembly.

House File No. 340 was introduced in the House Committee on Public Health along with the other bills above mentioned during the first two weeks of the session. Favorable action upon House File No. 340 was prevented through three or four members of the committee, who were vigorous in their determination that the osteopaths should not be limited in their practice. The osteopaths and their lawyer lobbyists then had introduced as an opposition measure, House File No. 174. This bill, had it passed, would have given to the osteopaths of Iowa every right and privilege of the doctor of medicine. The same osteopathic bill was also introduced in the Senate and was Senate File No. 110. Both the Senate and the House Health Committee acted upon these bills the same week. The Senate Committee reported Senate File No. 110 out for indefinite postponement and the House Committee reported both bills out for action, but without recommendations. Had the Senate adopted the report of its Health Committee for indefinite postponement, only House File No. 340 would have been acted upon in the House; but three or four members of the Senate prevented such action and succeeded in getting Senate File No. 110 re-referred to the Committee on Public Health. This action resulted in both our bill and the osteopath's bill being considered simultaneously in the House.

The two measures were placed on the calendar for the same day and the House voted to go into a committee of the whole for joint consideration of the two measures. This in itself was a move that greatly aided the cause of the osteopaths and was a part of the clever parliamentary procedure which was employed throughout the session by Mr. Forsling of Woodbury County, who sponsored the osteopathic cause. A member of the House, Mr. Nelson of Story County, was appointed chairman of the committee of the whole, which sat in session most of the day, Tuesday, March 24th. The meeting concluded with the adoption of a motion by Mr. Brown of Polk County, providing for a committee of six, three to be appointed by the sponsors of each bill, which committee should endeavor to effect a compromise. After considerable delay in securing the appointment, two meetings were held at which no compromise was reached and a report was made to the House to that effect on Thursday, April 2nd, whereupon a motion was made by Mr. Bair of Buena Vista County to table both bills. This motion was lost. It was then moved that both bills be re-referred to the compromise committee, whereupon a substitute motion or amendment was made to refer both bills to the House Sifting Committee. The substitute or amendment prevailed by a rather close vote and the motion as a whole was then voted upon by acclamation. The motion prevailed and both bills were put into the Sifting Committee, of which Mr. Forsling of Sioux City was a member, as well as Mr. Brown of Polk County along with two others who had vigorously opposed and voted against our bill. Since three opposing votes could prevent a bill from coming out of the Sifting Committee, it was obvious that our measure was lost for this session.

There were two outstanding results of this vigorous fight over House Files No. 340 and No. 174. The

first is that the attitude of practically every member of the House was clearly evident during the course of the voting. There were seven record votes on these two bills and while not all of the votes were positive evidence of attitude, yet the aggregate of them will clearly indicate the stand taken by various members of the House of Representatives. In addition, a very considerable number of representatives were vigorous and loyal in their adherence to our reasonable and just proposal, while a small number were equally opposed. Full reports upon the attitude and record of the various members of the House will be made to each medical society by this committee before the primaries next spring.

The second significant fact was the remarkable response of the members of the profession to the requests of this committee for co-operation and assistance. On both days, when House Files No. 340 and No. 174 came up for action there were present in the House physicians from every part of the state and on each occasion there were one hundred or more members of the society from outside Des Moines ready and willing to help. It is the feeling of all who followed the matter closely, and especially of our friends in the Legislature, that had the bills come up for a definite vote, House File No. 174 would have failed and House File No. 340 would have passed. Clever dilatory and parliamentary tactics resorted to by Mr. Forsling and other friends of the osteopaths were all that prevented the enactment of our measure.

The Committee wishes to express its appreciation of the excellent work done by Mr. Vernon Blank, managing director. He has a personal acquaintance with every member of the House and Senate as well as the public officials and as a result of this he was able to keep in constant contact with the members of the Legislature and spent many hours with them, both night and day. The manner in which he accomplished the results reported deserves the highest commendation. It would have been impossible for the members of the Legislative Committee to keep in contact with the proceedings of the Legislature, as it would have been impossible to make personal contacts with the different members. Mr. Blank made these contacts in a very efficient and agreeable manner.

There are two laws which go into effect July 4, 1931, which are important to the medical profession and carry penalties for their non-observance. These laws are printed in full below:

House File No. 225.

An Act prohibiting licensed practitioners of certain professions affecting the public health under title eight VIII of the code, 1927, from the use of any professional title or abbreviation other than that of the profession under which he is licensed and requiring each practitioner to use the proper designation and providing the penalty for violation thereof.

Be It Enacted by the General Assembly of the State of Iowa:

Section 1. Any person who falsely holds himself out by the use of any professional title or abbreviation, either in writing, cards, signs, circulars, or advertisements, to be a practitioner of a system of the healing arts other than the one under which he holds a license or who fails to use the following designations shall be guilty of a misdemeanor and shall be fined not less than twenty-five dollars ($25.00), nor more than one hundred dollars ($100.00), or be sentenced to thirty (30) days in jail.

A physician or surgeon may precede his name with the title "Doctor," and shall add after his name the letters, "M.D."

An osteopath or osteopathic surgeon may use the prefix, "Doctor," but shall add after his name the letters, "D.O." or "O.S." as the case may be, or the words, "osteopath" or "osteopathic surgeon."

A chiropractor may use the prefix, "Doctor," but shall add after his name the letters, "D.C." or the the word, "Chiropractor."

A dentist may use the prefix "Doctor" but shall add after his name the letters "D.D.S." or the word "Dentist" or "Dental Surgeon."

A podiatrist may use the prefix "Doctor," but shall add after his name the word "Podiatrist."

Any graduate of a school accredited on the board of optometric examiners may use the prefix "Doctor" but shall add after his name the letters "Opt." or "Optometrist."

No other practitioner licensed to practice his profession under any of the provisions of title eight, VIII, code of 1927, shall be entitled to use the prefix "Dr." or "Doctor."

House File No. 129.

An Act to amend sections twenty-two hundred eighty-five (2285), twenty-three hundred five (2305), twenty-three hundred six (2306) and twenty-three hundred nine (2309) of the code, 1927; to repeal sections twenty-two hundred eighty-one (2281) and twenty-two hundred eighty-eight (2288) of the code, 1927, and to enact substitutes therefor, relative to venereal diseases, and the duties of the state and local boards of health, and physicians pertaining to the same.

Be It Enacted by the General Assembly of the State of Iowa:

Section 1. That section twenty-two hundred eighty-five (2285), of the code, 1927, be amended by striking from line six (6) thereof, the words, "local board," and inserting in lieu thereof the words, "state department of health."

Sec. 2. That section twenty-three hundred five (2305), of the code, 1927, be amended by changing the period (.) in line eight (8) thereof, to a comma (,), and by adding thereafter the following:

"when an order for the same has been issued by any court of record."

Sec. 3. That section twenty-three hundred six (2306) of the code, 1927, be amended.

1. By inserting after the word "disease", in line four (4) thereof, the following: ", except on physician's order or prescription,".

2. By striking therefrom all after the word

"week", in line seven (7), and by adding in lieu thereof the following:

"to the state department of health, or to the full time county or municipal health officer, if such exists within the county."

Sec. 4. That section twenty-two hundred eighty-one (2281) of the code, 1927, be repealed, and the following enacted in lieu thereof:

"2281. Immediately after the first examination or treatment of any person infected with any venereal disease, the physician giving the same shall mail to the state department of health a report stating the case number, age, sex, color, marital condition, occupation, name of the disease, probable source of infection, and duration of the disease, except when the case occurs in a jurisdiction of a full-time municipal or county health officer, in which instance such report shall be sent direct to such officer who shall immediately forward same to the state department of health. It shall be the duty of the state department of health to report the number of the case and the name of the venereal disease reported as occurring in its jurisdiction, to each local board of health each month."

Sec. 5. That section twenty-two hundred eighty-eight (2288) of the code, 1927, be repealed, and the following enacted in lieu thereof:

"2288. When in the judgment of the local board it is necessary for the protection of the public health that any person infected with any venereal disease be quarantined, the procedure shall be the same as for other communicable diseases, except that the name of the disease present may be omitted from the quarantine card and the unafflicted members of the household shall be unrestricted. The local board may isolate such person in the detention hospital provided for in this chapter and shall cause to be administered to said person a proper course of treatment."

Sec. 6. That section twenty-three hundred nine (2309) of the code, 1927, be amended by adding after the period in line seven (7), "Failure to report any venereal disease as specified in this chapter shall be cause for the refusal of a renewal of license as provided in title VIII, chapter 115, section two thousand four hundred forty-seven (2447), of the code, 1927."

This report is respectfully submitted by the members of the Committee on Public Policy and Legislation.

Thos. A. Burcham, Chairman
Peter Bendixen
W. E. Wolcott

Dr. Burcham then moved that the report be received, as printed in the handbook. Motion seconded and carried.

REPORT OF COMMITTEE ON CONSTITUTION AND BY-LAWS

Dr. C. B. Taylor, Ottumwa, stated that the report had been printed in the handbook:

House of Delegates, Iowa State Medical Society:

Since there seems to be general sentiment prevailing throughout the state, and especially among the members of the Council, the officers of the State Society and many county officers, that the time has come to rearrange the Councilor districts, the Committee on Constitution and By-Laws has made a careful study of the problem and presents its recommendations in this report. The plan entails three steps: first, the actual rearrangement of districts; second, the provision for the election of Councilors for the reorganized districts; and finally, changing the word "congressional" to "Councilor" in two places in the By-Laws.

The redistricting plan proposed by the committee was published in the March, 1931, JOURNAL OF THE IOWA STATE MEDICAL SOCIETY in accordance with the following resolution adopted at a meeting of the committee held February 24, 1931: "Be it Resolved: That the Committee on Constitution and By-Laws go on record as favoring a redistricting of the state into eleven Councilor districts of nine counties each, with a view to facilitating the work of the Council and of the State Society and that a copy of the proposed redistricting be printed in the JOURNAL, together with a map showing the proposed districts." The map is reprinted as a part of this report.

Resolution Proposed for the House of Delegates

WHEREAS, The Constitution of the Iowa State Medical Society provides that there shall be eleven Councilors, and

WHEREAS, neither the Constitution nor the By-Laws makes any provision whatsoever regarding the counties comprising each Councilor district, and

WHEREAS, the present Congressional districts, which have for convenience been accepted as Councilor districts, are to be entirely changed and reduced to nine, and

WHEREAS, the automobile and the improved roads, connecting all county seats make practicable the formation of geographically compact districts, and

WHEREAS, the work of the Council can be greatly facilitated by the formation of districts of approximately uniform size and number of constituent counties,

THEREFORE, BE IT RESOLVED: That the present Councilor districts and the offices of Councilors as now constituted, be hereby vacated, and

BE IT FURTHER RESOLVED: That the House of Delegates hereby fixes the composition of the eleven Councilor districts of the Iowa State Medical Society as follows:

District No. 1—Allamakee, Winneshiek, Howard, Mitchell, Floyd, Chickasaw, Bremer, Fayette and Clayton counties.

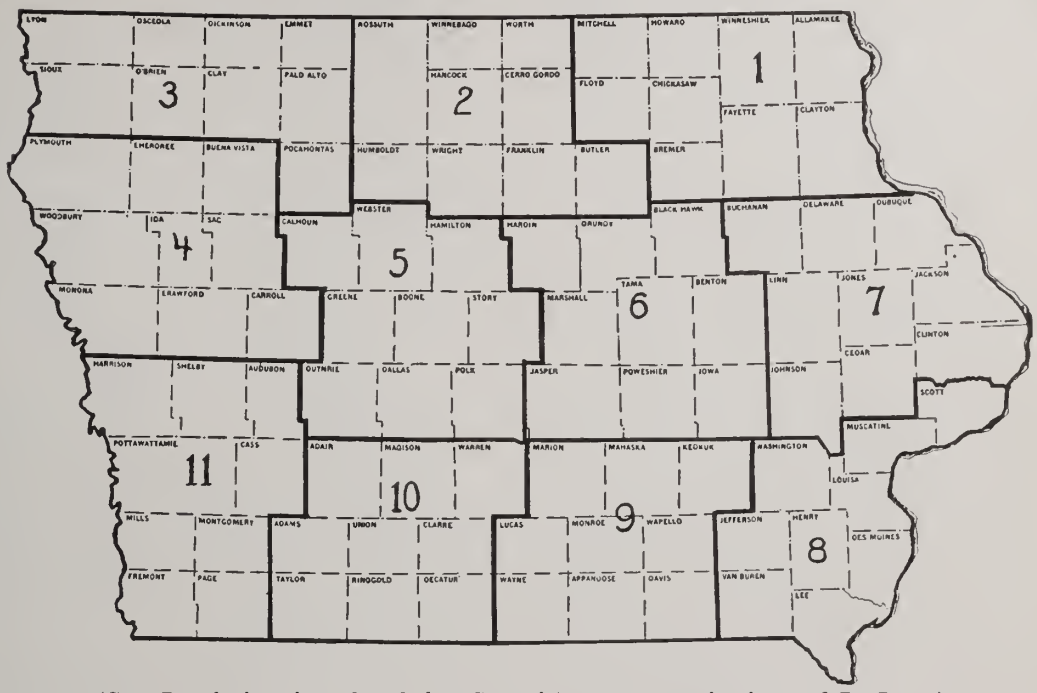
District No. 2—Worth, Winnebago, Kossuth, Hancock, Cerro Gordo, Butler, Wright, Franklin and Humboldt counties.

District No. 3—Emmet, Dickinson, Osceola, Lyon, Sioux, O'Brien, Clay, Palo Alto and Pocahontas counties.

District No. 4—Buena Vista, Cherokee, Plymouth, Woodbury, Ida, Sac, Carroll, Crawford and Monona counties.

District No. 5—Hamilton, Webster, Calhoun, Greene, Boone, Story, Polk, Dallas and Guthrie counties.

MAP SHOWING NEW COUNCILOR DISTRICTS



(See Resolution introduced by Committee on Constitution and By-Laws)

District No. 6—Black Hawk, Grundy, Hardin, Marshall, Tama, Iowa, Benton, Poweshiek and Jasper counties.

District No. 7—Dubuque, Delaware, Buchanan, Linn, Jones, Jackson, Clinton, Cedar and Johnson counties.

District No. 8—Scott, Muscatine, Louisa, Washington, Jefferson, Henry, Des Moines, Lee and Van Buren counties.

District No. 9—Keokuk, Mahaska, Marion, Lucas, Monroe, Wapello, Davis, Appanoose and Wayne counties.

District No. 10—Warren, Madison, Adair, Adams, Union, Clarke, Taylor, Ringgold and Decatur counties.

District No. 11—Audubon, Shelby, Harrison, Pottawattamie, Cass, Montgomery, Mills, Fremont and Page counties, and

BE IT FURTHER RESOLVED: That, for the purpose of reorganization, the Councilors for the First, Sixth and Eleventh districts shall be elected for a term of one year; the Councilors for the Second and Seventh districts shall be elected for a term of two years; the Councilors for the Third and Eighth districts shall be elected for a term of three years; the Councilors for the Fourth and Ninth districts shall be elected for a term of four years; the Councilors for the Fifth and Tenth districts shall be elected for a term of five years; and thereafter each Councilor shall be elected for a period of five years.

Proposed Amendment to By-Laws

The Committee on Constitution and By-Laws would move that lines 3, 4 and 5, Section 2, Chapter V of the By-Laws of the Iowa State Medical Society be amended by striking the word "Congressional" and substituting therefor the word "Councilor."

Proposed Amendment to By-Laws

The Committee on Constitution and By-Laws would move that line 14, Section 2, Chapter V of the By-Laws of the Iowa State Medical Society be amended by striking the words "in 1915 President also" and the parentheses surrounding these words.

The Committee,
Charles B. Taylor, Chairman,
John H. Peck,
Frederick J. Swift.

Dr. Taylor further reported:

I simply want to state a little more succinctly the necessity for such a report. The Republicans in Iowa got busy and tore our state all to pieces without consulting us and we have now only nine districts. Our Constitution requires eleven Councilors, as you will see in Article VIII, Section 1: 'The officers of this Society shall be a President, two Vice Presidents, a President-Elect, a Secretary, a Treasurer, *eleven Councilors* and three Trustees."

Hereafter there will be only nine congressional districts in the state of Iowa. Those nine districts do not in any sense of the term correspond to the present eleven districts under which we have been operating. There is nothing in the Constitution and By-Laws which will interfere with our redistricting of the State Society into some other form of Councilor districts. In fact, it makes it compulsory, if we have eleven Councilors, that there be eleven districts. Therefore, not originating with the Constitution and By-Laws Committee, but with the Councilors themselves, who found themselves in trouble, and believing that Councilor districts could be formed that would be vastly more acceptable to the

Councilors themselves, in that they would be more easily accessible, this Committee has presented here in the form of a resolution a redistricting plan. I should like to have you gentlemen read this carefully, since it will come up later for vote. I hope you will give it your careful attention.

Dr. Taylor moved that the report be received. Motion seconded and carried.

REPORT OF THE COMMITTEE ON PUBLICATION

In the absence of Dr. Simmons, Chairman of the Committee on Publication, motion was duly seconded and carried that the report of the committee be received.

House of Delegates, Iowa State Medical Society:

Since the last annual session the committee has sponsored the publication of the twelve monthly issues of the JOURNAL of the Iowa State Medical Society, and these journals testify to the activity of the committee and constitute a detailed report.

It has been found necessary to increase the number of pages in the JOURNAL, since we have been favored by an unusual number of worth while contributions from many sources. Many of these contributions, while not delivered at the annual session, are of themselves so meritorious that their acceptance has been demanded. The editorial policy, however, remains unchanged in so far as maintaining priority in publication of papers delivered at the annual session.

The increase in size of the JOURNAL has added somewhat to the publication expense and emphasizes the need for additional advertising to carry a journal of this size. Our increased costs, however, have been offset to some extent by the increase in advertising rates made effective by the Cooperative Medical Advertising Bureau in recognition of the improvements made in our JOURNAL. The sale of advertising space must in the final analysis depend upon the extent that the members of the society patronize our advertisers and your cooperation in this matter is urgently solicited.

A detailed financial statement of the JOURNAL will be found elsewhere.

R. R. Simmons, Chairman.

REPORT OF THE COMMITTEE ON FINANCE

Dr. Ernest C. McClure, Chairman, presented the following report:

Since the committee did not have the report of the Trustees, it was impossible to prepare a report for publication in the handbook. For the last several years the Constitution has stated that the Trustees must have the accounts of the society audited. Before that time it was the duty of the Finance Committee to audit the accounts. This means an all-night job and as you will readily understand, would be greater this year than ever before. We would like to do our part of the work, but see no reason for an additional report. We will be glad to accept the report of the certified accountant if it is the pleasure of the House of Delegates.

Motion was made and seconded to receive the report of the committee.

Dr. McClure then asked Dr. Fay for his opinion, who replied that he saw no objection to accepting the accountant's report. Dr. Fay moved that it be the sense of the House of Delegates that this committee might accept the report of the certified accountant.

The Chairman ruled that a motion was already before the House to receive the report of the committee. Dr. Fay accordingly withdrew his motion.

The original motion carried.

Dr. Fay then remade his motion, as it stood before. The motion was seconded and carried.

REPORT OF THE COMMITTEE ON NECROLOGY

House of Delegates, Iowa State Medical Society:

The Council of the Iowa State Medical Society recognizes its duty to "prepare for each session suitable biographical notices of deceased members" as is stipulated and required for each annual meeting by provision of the Constitution. This old established custom was revived last year and is worthy of continuation indefinitely.

It is fitting, indeed, that we should pause for a moment during this business session to render brief formal tribute to our deceased fraters who have passed on during the past twelve months. The grim reaper had an unusually heavy harvest as, from the survey of the best available sources, we find that seventy-five of our confreres have performed their last earthly service and gone to their just reward. Many of them had passed the biblical three score years and ten and all had departed this life deeply appreciated by their fellow men for their good works.

Of the seventy-five deaths among Iowa physicians, several were pioneer doctors long retired from active practice, and but one under the age of 40 years. The average age, 68 years, distributed among the decades as follows: 30 to 40 years, one; 40 to 50 years, three; 50 to 60 years, twelve; 60 to 70 years, twenty-three; 70 to 80 years, twenty-five; 80 to 90 years, eight; 90 to 100 years, three. Three of these deceased members were women. Practically all of this number of physicians have been members of the Iowa State Medical Society. Four were from the group of former presidents of the Society, namely: Doctor Allen, Doctor Crawford, Doctor Fairchild and Doctor Guthrie.

The causes of death were:

Heart disease	16	Cholecystitis	2
Cerebral hemorrhage	8	Gastric ulcer	1
Angina pectoris	3	Cirrhosis of liver	1
Arteriosclerosis	3	Peritonitis	1
Coronary occlusion	2	Spinal meningitis	1
Cerebral thrombosis	1	Septicemia	2
Aneurism	1	Pernicious anemia	1
Senility	1	Diabetes	1
Uremia	2	Lymphocytic leukemia	1
Nephritis	1	Malignancy	6
Prostatitis	1	Fracture	2
Pneumonia	1	Automobile accidents	3
Pulmonary tuberculosis	1	Suicide	4
Appendicitis	1	Cause not given	7

The names are as follows:

Henry Albert
Sidney Corbin Ainsworth
William L. Allen
Edward C. Ayres
Frederick J. Becker
Anton John Beyer
Varillas Clenthas Birney
David Jenness Brookings
Francis Austin Burrows
William Thomas Chinn
Charles Melvin Collins
George E. Crawford
J. Lynn Crawford
Henry Munson Dean
Joseph Delahunt
William Jacob Egloff
Evan Stark Evans
David Sturges Fairchild, Sr.
Herman Sheldon Farr
Arthur Ernest Gillett
Bertha Allen Greer
James Renwick Guthrie
William Alexander Hamilton
Claus Hesing Heddens
Siegfried E. Herbst
Harry Martin Hoag
Christian Hoeg
Zachary Taylor Holtsclaw
Benton M. Howland
Charles Edward Huband
Newton S. Hubbell
Charles Bernard Jackman
Oliver H. Perry Jeffries
John R. Jones
James M. D. Joslin
Elias W. Kearby
Edward E. Kirkendall
Warren A. Kitchen
Fred Ernest Lambert
Raymond Lee Latchem
William E. Lawhead
Alexander R. Leith
James Theodore Livengood
Rosa Ellen Hinshaw Lowder
Elias Sheridan McCord
Paul Shaeffer Mabry
Caleb A. Montgomery
George Phillip Neal
Arthur Devere Newberry
Ada P. North
Charles L. Paisley
Frank Wellington Port
Charles Bower Powell
John Patrick Redmond
Joseph Emery Reed
Fritz Rosenbladt
Willis Albert Scott
Charles Edward Ruth
Almon S. Shafer
Albert William Sherman
Arthur Wayland Slaught
George Luther Smith
Jacob F. Snoke
Edwin Elmer Sowles
George Henry Stanger
George A. Starkweather
John M. Sturdivant
Louis Minor Taylor
Lester Olin Thompson
Maurice Wahrer
William F. Waight
William F. Weidner
Arthur LeRoy Wheeler
Charles M. Whicher
Jay Philon Whitney

Respectfully submitted,
THE COUNCIL
By John H. Peck, Chairman.
Samuel T. Gray, Secretary.

Dr. Gray, Secretary of the Committee, moved that the report be received, and at his suggestion the Chairman called on the House to rise following the presentation of the report, after which the motion was seconded and carried.

Reports of Special Committees

REPORT OF THE MEDICAL LIBRARY COMMITTEE

House of Delegates, Iowa State Medical Society:

The Medical Library Committee is indebted to Dr. Jeanette Dean-Throckmorton, Librarian of the Medical Department, Iowa State Library, for the following report:

The Medical Department of the Iowa State Library has been materially increased the past year through a number of generous gifts: Mrs. David S. Fairchild of Clinton, gave her husband's entire library after his death, as did Mrs. Thomas Powers of Clarinda, Dr. Thomas Irish of Forest City and Dr. Emma J. Neal of Cedar Rapids. The late Dr. C. E Ruth was exceedingly generous with a gift of over 250 books; likewise Drs. W. L. Bierring, O. J. Fay, M. G. Sloan, J. W. Osborne, A. C. Conaway, Ben Budge, Major J. H. Gould, D.V.M., Iowa State Medical Society, and others.

A museum of old medical instruments and rare books having historical or pioneer interest has recently been started mainly through the generosity of Dr. Corwin S. Cornell of Knoxville and Dr. William A. Rohlf, President of the Iowa State Medical Society, and now comprises 61 articles of which two are surgical cases used in Civil War times. We confidently expect to this to increase in size and value.

Below is a statistical summary of services rendered, and publications received and total volumes in the library:

Requests for literature		2,374
Pieces of literature loaned		8,921
Pieces of literature borrowed from other libraries		19
Letters written		1,437
Cards written		1,630
Visitors in the Library		1,671
Telephone calls coming in (Long distance 8)		461
Cards made for new requisitions—		
Book file	5,722	
Journal file	251	
Reprint file	6,770	
	12,743	12,743
Periodicals regularly received—		
By subscription	139	
By gift	70	
	209	209
Volumes in the Library June 30, 1930 (Increase of 4,180 since July 1, 1928)		12,900
Gifts to the Library—		
Books		2,092
Journals (bound)		978
Journals (unbound)		20,208
Reprints		2,600
Pictures		3
Museum exhibits (5 donors)		
Duplicates given to other Libraries—		
Books		206
Journals		216

Felix A. Hennessy, Chairman.

Dr. Hennessy urged that the members of the House of Delegates make a special effort to visit the State Medical Library while in Des Moines.

Upon motion duly seconded and carried, the report of the Committee as printed in the handbook was received.

REPORT OF COMMITTEE ON MEDICAL ECONOMICS

House of Delegates, Iowa State Medical Society:

Your committee on Medical Economics has given its attention during 1930-31 to five major matters:

1. Contract practice.
2. Commercial collection agencies.
3. Examination and certification of indigents.
4. Malpractice insurance.
5. Revision of recommended state fee bill.

Contract Practice

At the May, 1930, meeting of the House of Delegates, the Medical Economics Committee was assigned the task of studying contract practice by the following resolution:

> "Dr. William Jepson, Sioux City, moved that the matter of Contract Practice be referred to the Committee on Medical Economics, for further consideration. Seconded and carried"

Except for a recommendation made to the Committee on Publications of the Iowa State Medical Society in the specific case of a contract between members of the society and an insurance company, the committee has made no specific investigations, for the following reasons: (1) the task of thoroughly investigating contract practice in the state of Iowa is of such magnitude that it could not be fairly undertaken without special personnel and appropriations for that purpose; (2) while the Medical Economics Committee might properly study a specific contract or contracts to determine the financial fairness of the arrangement, yet the problem is primarily one of medical ethics, so that it falls within the sphere of the Council's activities, and the committee therefore feels that action in this matter should be instituted and carried out by the Council and that any investigations of economic aspects of the general problem or of specific cases should be carried on by the committee only upon direction or request from the Council. (Such procedure would be particularly appropriate since the Committee on Medical Economics was originally created by the House of Delegates at the request of the Council.); (3) contract practice is of national scope. A considerable proportion of all contracts in Iowa are with national organizations or corporations and for that reason it is the unanimous feeling of the members of the committee that the American Medical Association must take the lead in any fruitful investigation in this field.

The committee therefore proposes to the House of Delegates the following resolutions in this connection:

"RESOLVED, That the House of Delegates of the Iowa State Medical Society request that the American Medical Association, possibly through the Bureau of Medical Economics, institute a nation-wide study of contract practice and that, if feasible, the various state societies through their proper committees should be requested to assist, and each carry out its local part of such national study.

"RESOLVED, That the House of Delegates of the Iowa State Medical Society instruct its delegates to the American Medical Association to call to the attention of that body the desirability of having the Bureau of Medical Economics of the American Medical Association make a study of contract practice."

Commercial Collection Agencies

Several collection agencies which were approaching Iowa physicians to secure the listing with them for collection of their slow accounts, having applied for advertising space in the JOURNAL, the Committee on Publications referred them to the Medical Economics Committee with the request that the agencies be studied and approved or disapproved as to methods, personnel, etc.

The committee gave careful consideration to the problem of setting up a series of standards which should be applied to such agencies. Questionnaires were sent to the applicant agencies which supplied part of this information. Formal inquiries were made of physicians who had employed the various agencies and in addition, personal interviews were used to secure the information necessary to properly appraise these various collection agencies. Each agency being studied was also asked to subscribe to the following: "Do you agree to have any differences between your agency and members of the Iowa State Medical Society referred to the Committee on Medical Economics for adjustment?"

It was the unanimous feeling of the committee that the willingness of an agency to enter into this agreement was of great importance in determining its attitude, reliability and desire to be of real service.

On account of the large number of firms and individuals which are continually offering collection services to the members of the Iowa State Medical Society, the committee felt that in addition to passing upon those agencies which desired to advertise in the JOURNAL, it was important to adopt procedure which would enable the members of the society to know whether a particular agency soliciting their business was approved by the committee or not. To this end a statement was published in the April JOURNAL which included the names of the approved agencies and also there was issued to each approved agency a card setting forth the fact that the agency had been approved, such card to be in effect for a limited period and subject to renewal if the agency continued to operate satisfactorily and there were no unadjusted claims made by members against the agency. The approval card reads as follows:

"This is to certify that the..... has been approved by the Medical Economics Committee of the Iowa State Medical Society as offering a satisfactory type of collection service to Iowa physicians. This agency has signed the following agreement with the Medical Economics Committee: 'I hereby agree to have any differences between this agency and the members of the Iowa State Medical Society referred to the Committee on Medical Economics for adjustment.'

This approval is in effect until January 1, 1932,

but is subject to withdrawal at any time and may be renewed on that date.

MEDICAL ECONOMICS COMMITTEE.

By.....

Chairman."

The agencies approved by the committee up to April 15, 1931, were:

Business Men's Adjustment Bureau, Des Moines.

Iowa Adjustment Company, Cedar Rapids.

National School of Honesty, Des Moines.

Examination and Certification of Indigents

Wapello county, and later Linn county, adopted the plan of having a committee from the county society act as "examining physician" for persons applying for commitment to the University hospital.

This plan has two advantages: it serves to solve local problems connected with commitment of state patients and certification of cost patients; and it also produces income for the county medical society. ("State patients" are those committed by the court for care at state expense. "Cost patients" are accepted by the university hospitals upon certification of a physician that they cannot afford to pay professional fees but only hospital fees.)

Many physicians have experienced difficulties in determining the proper course of action when persons have come as prospective patients (either state or cost patients) whose financial status did not plainly entitle them to gratuitous services. When such persons are past patients or friends of patients or friends of the physician in question, the situation is often made most difficult. In such cases, the pooling of judgments and the sharing of responsibility is a safe procedure.

Another reason sometimes exists, for it was mentioned in the report of the Committee on Medical Education and Hospitals that some counties "sent patients to the university hospitals who have no value for teaching purposes, and who could be treated as efficiently and much more economically at home." A committee of this sort could serve as a local arbiter in such situations. The following extracts from a letter written by the secretary of the Wapello County Medical Society explains the plan as it operates there:

"By agreement with the head of the Social Service Bureau, the county attorney, and the judge of the district court, a committee of five has been appointed from the County Medical Society to serve as an examination board for all cases which are designated to go to the hospital at Iowa City. This board consists of three men from Ottumwa, Iowa, (of which one should be a specialist in Eye, Ear, Nose and Throat), the other two, members of Wapello County Medical Society in surrounding towns. We make it a rule that each patient has to see at least two members of the committee, who must unanimously agree that the case is one that cannot be handled at home. If it is deemed necessary to send the case to Iowa City, then one of the physicians fills out the examination blank, and the fee that he gets for this examination is turned back into the treasury of the County Medical Society, thereby taking away any financial gain that any member of the committee might get from sending patients to Iowa City."

In addition to solving some of the local problems connected with the commitment of both state and cost patients to the university hospitals, this plan has a very important financial aspect. About 10,000 patients are annually committed to the university hospitals and the total fees paid for examinations amount, therefore, to about $50,000. If this plan were in operation in every county in the state, the combined component societies would receive a total of $50,000 per year. While the distribution of these funds would, of course, be unequal, yet they would go far toward meeting the operating expenses of most of the local societies, and thereby become a very important factor in the advancement of organized medicine.

The committee would therefore propose to the House of Delegates the following resolution:

"WHEREAS, the Medical Education and Hospitals Committee found that in many cases state patients were being committed to the university hospitals without due regard for the urgency of the case, the indigency of the patient or teaching needs, and

"WHEREAS, it is also reported that in some localities physicians are certifying as cost patients persons who are in fact able to pay a professional fee at home, and

"WHEREAS, Linn and Wapello counties have in operation a plan which seems to eliminate these difficulties,

"Therefore, BE IT RESOLVED that the House of Delegates of the Iowa State Medical Society recommend that each component county society should endeavor to arrange with the district court for the creation of a committee of the local medical society which should examine and pass upon all state patients and which committee should also certify cost patients to the university hospital authorities, and that the examination fees so received should be turned in to the treasury of the County Society."

Malpractice Protection for Society Members

Since there seems to be a growing sentiment as to the necessity of increasing the dues of the Iowa State Medical Society to make them more in line with the dues of surrounding states and to supply the funds to continue the present constructive program of the society, your Committee on Medical Economics has taken the preliminary steps to work out a proposal which it herewith presents to the end that the society may increase its income to $10.00 per member and yet make an annual saving to each member in his expenses for dues and malpractice insurance.

Such results could be accomplished through the purchase of a group malpractice insurance policy by the members of the State Society at an approximate saving of 30 per cent per year. At present it is estimated that at least three-fourths of the members of the Iowa State Medical Society carry malpractice insurance at a general cost of $21.00 per year. If the society were to enter into an agreement with one of

the insurance companies which write group malpractice insurance, arrangements could be made which would reduce the actual cost to about $15.00 per member. It is the unanimous opinion of the committee that this should be done. If this action were coupled with an increase of dues from $7.50 to $10.00, the total which each member would pay for both malpractice protection and State Society dues would be $25.00. At present most of the members are paying $21.00 for their insurance and $7.50 for State Society dues, which makes a total of $28.50. The plan proposed would reduce this total cost of $28.50 to $25.00 and still increase the income of the society. An additional important advantage of such a plan is that the insurance company would enter into an agreement with the State Society that no cases would be settled out of court without the consent of the defendant physician and the State Society.

The committee therefore recommends to the House of Delegates the adoption of the following resolution:

"RESOLVED, that the House of Delegates of the Iowa State Medical Society recommend to the Trustees for favorable consideration the purchase of group malpractice insurance for the members of the Iowa State Medical Society at a net cost of not to exceed $15.00 per member and that the premium upon such insurance shall be paid by the members simultaneously with the payment of their dues."

It should be made clear, however, that the above resolution should be adopted only in connection with two other actions by the house, both of which involve amendment of the By-Laws. The adoption of the amendment to Chapter I, Section 1 of the By-Laws offered by the Committee on Constitution and By-Laws which increases the assessment from $7.50 per capita to at least $10.00 per capita, is an integral part of the plan and the committee would urge that the proposed resolution be adopted only after an amendment increasing the dues is adopted by the House of Delegates.

The committee would further urge that if the amendment above mentioned and the proposed resolutions are adopted, then the By-Laws of the State Medical Society should be amended by striking out entirely those sections providing for medico-legal protection.

It is also suggested that if this general plan is adopted, some provision should be made for permitting those members who do not desire to purchase malpractice insurance to pay only the state dues.

Fee Bill

The committee has devoted considerable time to a careful study and revision of the recommended fee bill proposed by the committee and adopted by the House of Delegates in May, 1930. An effort was made to secure the fee bills now in effect in Iowa counties having such fee bills and 40 were secured. The average of these was taken and these figures were used in the revision which is herewith submitted for action.

We have record of 47 fee bills in existence in Iowa at this time. Some of them are old and others are in disuse because adjoining counties are not using fee bills or are employing ones which vary so far that the overlapping of practice makes the maintenance of fees difficult. The desirability of the adoption of a fairly uniform fee bill by each of the County Societies is therefore evident. The committee would urge that the House of Delegates adopt the following resolution:

"RESOLVED that the recommended fee bill submitted May, 1931, by the Medical Economics Committee of the State Medical Society be recommended to the favorable consideration of each component County Society with a view to its adoption."

EXHIBIT "A"

MINIMUM FEE BILL RECOMMENDED BY THE COMMITTEE ON MEDICAL ECONOMICS

May, 1931

General Medicine and Surgery

Abscess, opening—simple superficial	$ 3.00
Amputation, arm or forearm	100.00
Amputation, breast—simple	100.00
Amputation, breast—radical	200.00
Amputation, cervix or coccyx	50.00
Amputation, hip or thigh	150.00
Amputation, finger or toe	15.00
Amputation, leg	100.00
Anesthetic service—per hour, or fraction	10.00
Appendectomy	125.00
Aspiration, abdomen, chest	15.00
Aspiration, knee	5.00
Cholecystectomy or cholecystostomy	200.00
Colostomy	150.00
Attendance at court, per day	50.00
Insurance, certificate of health or death	2.00
Office visit	2.00
Consultation by telephone	1.00
Decompression, skull	150.00
Dislocation, ankle, shoulder, wrist, jaw	25.00
Dislocation, elbow, hip, knee	35.00
Dislocation, finger, toe	5.00
Dressing, simple	1.00
Enterorrhaphy, Entero-anastomosis	200.00
Examination, health	5.00
Examination, involving question at law	25.00
Postmortem, pathologic	50.00
Fissure	25.00
Fistula, in ano, operation for	50.00
Fracture, clavicle, unoperative	30.00
Fracture, unoperative, radius, ulna,	25.00
Fracture, unoperative, tibia, fibula, maxilla, patella, humerus	50.00
Fracture, unoperative, femur, pelvis	100.00
Fracture, unoperative, ribs	15.00
Fracture, unoperative, toes, fingers	10.00
Fracture, operation for ununited	150.00
Fracture, if compound or comminuted, percentage added,	50 per cent
Gastro-Enterostomy, Gastrectomy	250.00
Hemorrhoids	75.00
Herniotomy	100.00
Plaster cast, service on	10.00

Resection, elbow, hip, knee, jaw	200.00
Resection, rib	50.00
Stomach pump, emergency	15.00
Toe-nail, ingrowing, operation for	15.00
Visits, day (in town), within one mile	2.50
Visits, night (in town), within one mile	5.00
Visits, each additional patient in same family	1.00
Visits, beyond one mile, additional charge per mile	1.00

Genito-Urinary

Bladder, operation	100.00
Bladder, irrigation	3.00
Bladder, segregation of urine	25.00
Castration	100.00
Circumcision	25.00
Gonorrhea, treatment	3.00
Hydrocele, operation for	75.00
Hydrocele, tapping	5.00
Diverticulum of bladder, operation	200.00
Prostatectomy	200.00
Stone in kidney, operation	200.00
Ureters, catheterizing	25.00
Cystoscopic examination	15.00

Gynecology and Obstetrics

Caesarean section	200.00
Dilatation and currettement of cervix	35.00
Hysterectomy, subtotal	150.00
Hysterectomy, total	200.00
Delivery, normal	35.00
Detention per hour after five hours	5.00
Version	75.00
Forceps delivery	50.00
Perineorrhaphy	100.00
Delivery of placenta	15.00
Miscarriage	30.00
Pelvic laparotomy	150.00

Eye, Ear, Nose and Throat

Cataract, operation for	150.00
Ectropion, entropion, operation for	100.00
Eye, enucleation of	100.00
Eye, removing foreign body from cornea	3.00
Iridectomy	100.00
Intubation	75.00
Mastoidectomy	125.00
Nasal septum, operation for deflection	75.00
Pterygium, operation for	50.00
Paracentesis of eardrum	5.00
Strabismus, operation for	100.00
Sinus operation	50.00
Tonsillectomy (Adenoids $10.00 extra)	30.00

Miscellaneous

Blood transfusion	50.00
Urine analysis, chemical	1.00
Urine analysis, complete	3.00
Blood count, red, white, hemoglobin	1.00
Blood count, differential	2.00
Blood count, complete	5.00
Blood Wassermann	5.00
Immunization, typhoid, diphtheria	5.00
Vaccination	2.00
Intravenous treatments	5.00
Intramuscular treatments	2.00
Spinal puncture	10.00
Varicose vein treatments—injection method	25.00
Consultation, within one mile	10.00

Respectfully submitted,

Committee on Medical Economics
John I. Marker, Chairman
Ratford F. Childs
Corwin S. Cornell
James C. Donahue
Isaac E. Nervig

Dr. Marker called the particular attention of the House of Delegates to the recommendations of the committee regarding contract practice, the certification of indigent patients, the question of malpractice insurance, and the fee bill.

Upon motion duly seconded and carried, the report was received.

REPORT OF COMMITTEE ON MILITARY AFFAIRS

The report of the Committee on Military Affairs was presented by Dr. Macrae, Chairman of the Committee:

To the House of Delegates Iowa State Medical Society:

The Surgeon General of the Army heartily endorses the appointment of military committees by county medical societies as a means of contact between the Medical Department of the Army and the members of your medical society, regarding Medical Department Reserve Corps matters. The great importance of such a committee for an efficient medical service is fully realized by this office in carrying out our real objective toward preparedness for national defense.

It is desired that the purpose of this committee will be: (a) To establish and maintain contact with this headquarters through the Corps Area Surgeon; (b) To promote the organization of the Medical Department Reserve Corps by procurement of enrollments therein; (c) To receive information from this headquarters in connection with the Medical Department Reserve Corps and to convey the same to the society; (d) To convey the recommendations of your society for the improvement of the organization and training of Medical Department Reserve Officers.

When and if such committees are created they shall submit all actions taken by them to the central state committee, who in turn shall submit recommendations to the House of Delegates of the Iowa State Medical Society.

The following purposes to be kept in mind:

(a) Foster a spirit of interest in the Reserve Corps.

(b) Establish and maintain contact with the War Department through this corps area.

(c) Promote the organization of the Reserve Corps by procurement of enrollments therein. Special effort desired to obtain men just after graduation from Medical School.

(d) Receive information promulgated by the War Department in connection with the Reserve Corps and to convey the same to your state and county societies.

(e) Convey the recommendations of the society for the improvement of the organization and training of the Reserve Officers to this office.
(f) At least once a year it is desired that each county should have a military evening with a program devoted to Medical Reserve matters, and one paper on military duty at the State Society meeting. Some hospital unit in the county could take up the study of mobilization and function of unit in case of local disaster, such as flood, cyclone, etc., and keep unit prepared to function promptly for such an emergency.
(g) Report any Medical Officer unfit for Medical Reserve Corps, giving reasons.
(h) Favorable publicity for the Reserve Corps instituted by Medical Associations through their journals and the press.

Your committee recommends the adoption of the report of the Committee on Military Affairs and that each county society be informed of the action taken.

Respectfully submitted,
DONALD MACRAE, JR., Chairman,
Committee on Military Affairs.

Dr. Macrae moved that the report of the committee be received. Motion seconded and carried.

REPORT OF COMMITTEE ON MEDICAL EDUCATION AND HOSPITALS

House of Delegates, Iowa State Medical Society:

The Committee on Medical Education and Hospitals, in view of the comprehensive nature of their published report, wishes to call your attention to the principal facts brought out in order that the necessary steps for solution may be undertaken and in order that any erroneous deductions may be corrected.

In the first place, it seems essential that the committee define its position in regard to certain phases of the problems it has studied. The committee takes the position that the State of Iowa is already committed to the maintenance of a first class medical college and to the plan of centralized medical care of a portion of its indigents. The people of Iowa have said through their legislature that they want a medical school of 500 students and have supplied the physical equipment for such an institution. They have adopted the Perkins, Haskell-Klaus laws to supply the necessary clinical material and have built hospitals adequate, if filled with patients, to meet the teaching requirements. The committee assumes, as it must, that the people of the state meant what they said when they formulated and adopted this plan. The committee does not attempt either to defend or condemn this decision of the state to maintain a medical college and provide care for the indigent sick. It has only tried to point out wherein the laws are succeeding or failing to accomplish those ends for which they were adopted.

In the second place, it has come to the attention of the committee that an erroneous interpretation has been placed upon one of the important statements made in the report. After reading the report, a few individuals have assumed that private hospitals are able to meet the cost of caring for county patients at a charge of $2.70 per diem. This is not the case. The report clearly states on page 9, in discussing the table on page 12, and again on page 49 that the average charge of $2.70 for county patients in private hospitals is not the cost to the hospitals, but is what the hospitals actually receive. Indeed, it is plainly stated in conclusion number two that private hospitals are rendering such services to the counties at less than cost, and it is evident that "cost" as used in the summary paragraph, means cost to the county supervisors and not hospital operating costs. Here, as on pages 9 and 12, the $2.70 per diem is a charge and is not in any way to be considered as the cost of operating such local hospitals. Other studies than our own corroborate this fact. For example, the Surgeon General of the United States Public Health Service on page 241 of his 1930 report states: "The average per diem cost for marine hospitals, $4.15, is considerably lower than that in most other public hospitals for similar classes of patients and much lower than that of private hospitals." Although few hospitals were able to furnish the committee with accurate figures for the cost per day for ward patients, the committee is convinced that the per diem cost in Iowa hospitals is not less than $4.50.

Finally, the committee has been urged to present some recommendations based upon the information it has collected. In conformity with these requests, the committee would again call your attention to page 49 of the original report which is "a summary of what seem to be important facts and questions which must be fairly met if the best interests of the indigent sick, the medical profession, and the cause of medical education in the state of Iowa are to be fully served." Further, the committee wishes to call attention to the outstanding facts which must be considered if a solution of the problems is to be brought about. They are:

1. The university hospitals should be operated at capacity.
2. Some means should be found whereby the members of the medical profession can effectively assist in the selection of proper clinical material to be sent to the university hospitals.
3. Certain portions of the laws should be modified so that they will more efficiently and economically serve their true purposes.

In connection with this third point, we beg leave to offer the following constructive proposals, which we believe will act as a nucleus around which conservative, deliberate judgment may crystallize and result in fair, conservative and constructive legislation.

Proposed Plan of Action

Section One. The House of Delegates of the Iowa State Medical Society in regular annual session assembled, shall extend an invitation to all members of the Iowa State Medical Society, to all members of the Medical College of the Iowa State University, to all members of the Iowa State Department of

Health, and to all members of the Iowa State Board of Education to submit a signed, typewritten copy of any amendments, modifications or alterations which they think should be made in the laws of Iowa, as they pertain directly or indirectly to medical education, the control and management of hospitals, and the care of the indigent sick. Said signed and typewritten copy shall be in the hands of the Committee on Public Policy and Legislation of the Iowa State Medical Society not later than September 1, 1931. The Committee on Public Policy and Legislation of the Iowa State Medical Society shall have an unsigned copy of all said amendments, modifications or alterations, submitted to them in the form and manner above described, printed in the October, 1931, number of the IOWA STATE MEDICAL JOURNAL.

Section Two. In December, 1931, there shall be a meeting called of the House of Delegates in the city of Des Moines. Said meeting shall be called in the manner prescribed by the constitution and by-laws of the Iowa State Medical Society. To this meeting there shall be officially invited all members of the House of Delegates, all state and county medical officers, and such invited guests as the Committee on Public Policy and Legislation may determine. The object of this meeting shall be to study and discuss the amendments, modifications and alterations in the laws herein provided for as they have been submitted to the Committee on Public Policy and Legislation and published in the October number of the IOWA STATE MEDICAL JOURNAL; and to make such additional suggestions, amendments and modifications as said meeting shall deem to be in keeping with economic, conservative, constructive legislation.

Section Three. The Committee on Public Policy and Legislation of the Iowa State Medical Society shall have the amendments, modifications and alterations in the state laws (as suggested and agreed upon in the December, 1931, meeting of the House of Delegates), published in the February, 1932, number of the IOWA STATE MEDICAL JOURNAL. These amendments, modifications and alterations, as published, shall be presented to the House of Delegates of the Iowa State Medical Society at their regular annual meeting in 1932, by the Committee on Public Policy and Legislation.

Section Four. The House of Delegates of the Iowa State Medical Society at their regular annual meeting in 1932, may amend, revise, or modify the changes suggested in the law as published in the February, 1932, number of the IOWA STATE MEDICAL JOURNAL, and make such other changes as in their wisdom are needed at that time. Their final action at the 1992 regular annual meeting of the Iowa State Medical Society shall be prepared in proper form by the Committee on Public Policy and Legislation, and by them published, circulated and distributed as they deem proper, and by them presented to the Iowa State Legislature, which convenes in January, 1933.

The above report and recommendations are respectfully submitted.

B. L. Eiker, Chairman
A. W. Erskine
A. V. Hennessy

Dr. Eiker, Chairman of the Committee, moved that the report be received. Motion seconded and carried.

REPORT OF COMMITTEE ON THE HISTORY OF MEDICINE IN IOWA

House of Delegates, Iowa State Medical Society:

The committee during the past year has published in each issue of the IOWA STATE MEDICAL JOURNAL an article on the History of Medicine in Iowa.

In this department have been published several articles prepared by the late Dr. D. S. Fairchild on "The Practice of Medicine in Iowa in Early Days and After 1870;" two interesting biographies of pioneer physicians, one contributed by Dr. H. B. Young on Dr. Edwin James of Des Moines County, and the other by Dr. W. A. Rohlf on Dr. Oscar Burbank of Waverly; a review of the first medical directory of Iowa published in 1876; a medical history of Marion County, including that of the County Medical Society organized in 1872, with individual biographies. The biographies of members deceased during the past year, with their relation to medical progress in Iowa, have been published as completely as possible.

Through the courtesy of Dr. Felix A. Hennessy of Calmar, Iowa, the committee has come into the possession of a complete record of the minutes of North Iowa Medical Society, organized at McGregor, Iowa, June 22, 1859, continuing to October, 1903, which will be very helpful in completing the medical history of northeastern Iowa.

The committee will appreciate similar records of any of the older medical societies in Iowa, as well as of such counties and sections of the state where the medical history is incomplete. It hopes to gradually complete the medical history of Iowa started by Doctor Fairchild to be published in book form.

Respectfully submitted,

The Committee

Wm. Jepson
Frank M. Fuller
Arthur D. Woods
Norman F. Miller
Walter L. Bierring

Upon motion duly seconded and carried, the report of the Committee as published in the handbook was received.

REPORT OF SPEAKERS BUREAU COMMITTEE

House of Delegates, Iowa State Medical Society:

The House of Delegates, at the 79th Annual Session of the Iowa State Medical Society in May, 1930, adopted the recommendation of the Board of Trustees for the "continuance of a permanent central office with a lay executive in charge, the extension of present activities as the demands of the component societies and our membership warrant and *the addition of a qualified clerk or secretary to have special responsibility for all routine details connected with the maintenanee of a Speakers Bureau,*" was adopted.

A secretary was engaged in June. No definite work was started, however, as the committee to outline and direct the activities of the bureau had not been appointed. This committee was appointed by

the council and the first meeting of the committee called for October 28, 1930.

At the first meeting of the committee on the Speakers Bureau, the following outline of the scope and purposes of the bureau was formulated:

I. FUNCTION.
- A. Purpose.
  1. To increase the efficiency of the practitioner in Iowa.
  2. To promote the solidarity of the profession.
  3. To develop medical leadership in each community.
  4. To educate the public in problems of health.
- B. Procedure.
  1. All work to be carried out through local medical units.
     a. By members of the faculty of the School of Medicine of the State University.
     b. By members of the State Society especially qualified for certain tasks.
  2. By occasional distinguished outside talent.
- C. Promotion.
  1. Through the JOURNAL.
  2. Through the councilors, deputy councilors and county and district officers.
  3. By field workers.

II. SCOPE.
- A. Educational Activities.
  1. Extension courses in medicine and surgery under the auspices of the faculty of the medical college of the State University of Iowa.
  2. Clinics by the medical school faculty, Iowa doctors and guests.
  3. Symposia by the medical school faculty, Iowa physicians and guests.
  4. Addresses to scientific gatherings on medical economics, medical ethics, history, or other medical subjects.
  5. Health talks or demonstrations to lay audiences by medical school faculty, Iowa doctors, and others.
- B. Desired Affiliations.
  1. State Board of Health.
  2. State Medical Library.
  3. State Tuberculosis and Heart Associations.
  4. Hospitals and Sanatoria.
  5. Red Cross and Nurses' Associations.
  6. American Society for the Control of Cancer.
  7. Lay Welfare Organizations.
- C. Maintenance.
  1. By doctors taking special extension courses.
  2. County and district societies.
  3. Iowa State Medical Society.
  4. Contributions.

This outline was approved by the council and the activities of the bureau are being conducted on this basis.

The first project of the Speakers Bureau was the promotion of the postgraduate extension work for members of the Iowa State Medical Society by members of the faculty of the College of Medicine of the State University of Iowa. Courses in obstetrics and cardiovascular diseases were offered in five centers and drew an enrollment of about 190 physicians from 24 counties. These courses met with the unanimous approval of those taking them and have resulted in many requests for similar courses next year. The bureau wishes to acknowledge its appreciation of the cooperation of the College of Medicine, which made it possible for the bureau to extend this opportunity to Iowa physicians.

Simultaneously with the promotion of this extension work, the bureau was taking steps toward getting a list of physicians who were willing and qualified to give papers or talks before medical groups. Letters were sent to each councillor requesting him to give the names of those physicians in his district whom he felt could do this work. Letters were then sent to these 250 doctors asking them if they would accept the nomination and, if so, to list their qualifications—post graduate work, public speaking experience, list of prepared papers, etc. The bureau received answers from 40 physicians who had papers which were already prepared and indications from many others that they were willing to prepare papers on various subjects. Added to the other names that were already on file, these made a total of about 110 physicians who are listed with the bureau to speak to scientific audiences.

Several "teams" of speakers have been organized. That is, two or three men have prepared talks on one subject and are thus ready to present an entire evening's program of a symposial nature.

Through the services of these teams and speakers, the bureau has sponsored a few practical post graduate courses of its own, of from four to eight lectures. These are now being conducted in three counties and have been requested by other counties.

The Iowa Tuberculosis Association has this year booked its clinics through the Speakers Bureau. In scheduling such clinics, the bureau has endeavored to do two things: (1) to make the clinics an educational factor for the whole community; and (2) to conduct them as regular meetings of the local county medical society. Whenever possible a Community Health Day is being featured—speakers sent to address the school children, P. T. A., service clubs, community gatherings—on the same day of the clinic, in addition to the clinic and county medical society program. The clinics handled in this way have met with unusual enthusiasm and approval. Eight clinics have already been held and 25 or more are scheduled for the near future.

The bureau is at the present time working on the problem of lay education, which is undoubtedly one of the most important and difficult phases of the work which comes under its direction. After considerable deliberation and consultation with all available authorities, the committee chose a list of about eight subjects along which lines it was felt that the general public needs instruction, (medical education, preventive medicine, etc.). Then a small group of between 40 and 50 physicians were carefully selected

because of their special qualifications for this undertaking. Each of these men is to prepare talks on three or four of these subjects. When requests come in from lay organizations for speakers, the bureau will direct the choice of subject and in this way be enabled to carry on a concentrated educational campaign.

From these various lists of speakers, the bureau has sent out since June, 1930, 149 speakers. One hundred of these speakers went to 48 county society meetings; 49 speakers went to 46 lay meetings. Through our speaker placement service, we have been able to make society contacts with 36 county medical societies; with semi-scientific organizations in three counties; and with lay organizations in 25 different counties—a total of 49 counties to which the bureau has sent speakers. Arrangements made for the future include contacts with 18 counties that we have not yet reached.

The bureau is collecting a small library of material which will be of help to doctors in preparing speeches or papers. About ten packets of this material has already been sent to those requesting it. Material will also be looked up in the State Medical Library for those who need it. Papers are revised, corrected, or typed for those who desire such service. The bureau is attempting to keep a file of all papers given by their speakers.

It is a rule of the bureau that the expenses of any speaker sent out by it shall be paid by the organization requesting the speaker. The expenses include merely a mileage charge if the speaker drives, or carfare—nothing for his time. If any organization feels that it can not afford to pay such slight expenses, they may petition the bureau to that effect and in such cases the bureau may pay the expenses itself.

The following financial statement to date is submitted:

Cash received	$3,159.04	
Cash paid out		$1,692.01
		$1,467.03
Committee members expenses (Travel to meetings, etc.)	$ 196.32	
Printing	109.31	
Speakers' expenses	157.48	
University extension courses expenses	1,228.90	
	$1,692.01	
Accounts receivable:		
Speakers' expenses	$ 99.69	
County societies $71.19		
Lay organizations 28 50		
Accounts payable:		
Speakers' expenses 20.00		
Printing 12.45	32.45	67.24
		$1,534.27

The committee on the Speakers Bureau regrets exceedingly that it has been unable to reach its goal, which was to be of service to every county in the state of Iowa. We have no alibis to offer for this. We have tried to do our best because we feel that the work attempted is extremely important to the citizens of Iowa. Such an educational program must be built up slowly and carefully in order to have lasting results. While the Speakers Bureau Committee is indeed new in the State Society, yet we feel that the work which comes under its jurisdiction is of basic value in the protection and development of the best interests of the medical profession in the state of Iowa.

D. J. Glomset, Chairman
J. C. Shrader
T. U. McManus

Upon motion duly seconded and carried, the report of the Committee as published in the handbook, was received.

The Secretary, Dr. Parker, then rose to a point of privilege, stating that in November he had been invited to attend the White House Conference on Child Health, called by the President. In his stead he delegated Dr. Fred Moore to report to the Society.

Dr. Moore presented the following report:

In the time allotted it is quite impossible to give you any idea of the extent of the investigation and conclusions and recommendations of the White House Conference. I shall simply attempt to outline briefly for you some of the things which they tried to do and their method of organization. You are all aware that it was a perfectly voluntary service conference, except for the necessity of a few paid full time executives. It was organized and planned in the first place by a group of people selected from over the country. There was a planning committee. Then it was placed under the direction of the Secretary of the Interior, Dr. Ray Lyman Wilbur.

The Conference itself then proceeded in four groups. The first division was that of Medical Service; the second, Public Health; the third, Recreation and Education; and the fourth, Handicapped Children. All told, there were probably ten or twelve hundred people who gave very considerable contributions to the investigations in this Conference. They worked about one and one-half years.

The thing which was held continuously before this Conference as their objective was to determine in a national sense what is being done for children; what should be done; and how it should be done from a standpoint of health and education.

The Medical Service Division was divided into three groups; maternal and prenatal welfare; growth and development; and third, medical service for children.

The Public Health Division was divided into two groups.

The Education and Recreation Division was divided into half a dozen more.

The Handicapped Children Division was approached from two angles; the child who is physically handicapped, and the child who is socially handicapped, such as the child without parents, the child in an institution, and problems of the Juvenile Court.

Outstanding people from all over the country de-

voted a great deal of time to these investigations. On the Committee on Maternal and Prenatal Welfare you will find the names of the most outstanding men in the field of obstetrics in this country. On the Committee on Growth and Development are outstanding men in anatomy and physiology.

The reports of the various committees, when assembled (they will be ready for distribution within the next few months), will be tremendous in volume. It is perfectly safe to say that never has there been assembled such a comprehensive statement in regard to health interests of children as these reports will offer.

The Committee on Medical Care of Children included many pediatricians over the country and their procedure, like that of the other committees, included investigations, conclusions and recommendations regarding every phase of medical care pertaining to children; investigation of children's hospitals and health centers, evaluation of training in pediatrics and obstetrics, etc.

The present status is this: For a year and a half they had small group meetings at various places over the country, in which they discussed these problems and many surveys were made, much information collected, and presented at the Conference in November and February. These will be available in sections in pamphlet form. Those interested will be able to get information in such allottments as they may wish.

At the present time there is under organization a follow-up committee of national scope for the White House Conference. Doubtless the purposes of that committee will be to promote recommendations and findings of the Conference throughout the country. It is obvious that a national study of this kind must be expressed somewhat in national terms. Perhaps as regards local or state sections, it may not apply. It is also obvious that unless information thus collected be put to some use for the welfare of children locally, then the time, money and energy expended in the conduct of the Conference will be absolutely useless. There will no doubt be definite effort made to promote regional or state conferences of similar character. In many activities pertaining to child welfare, a great deal of the control has been in the hands of lay people. That was not true in this Conference. The Medical Section without any question dominated in a large measure the procedure in the Conference.

I think it is exceedingly important that organized medicine recognize the findings of this Conference and recognize the fact that its results will undoubtedly be quoted and accepted as more or less standard procedure for a period of ten or fifteen years before another such survey is attempted. Therefore, I think it is exceedingly important that organized medicine take cognizance of this situation and assume its responsibility in the direction of activities pertaining to child health and protection.

Some requests have already been made to the Governor from the Washington office that there be some such conference held in Iowa and I know that some lay people have been attempting some activities in this respect. As yet there has been nothing done except a meeting of the Iowa Public Health Officers Association last month. Some results and recommendations were discussed.

On account of the importance of the medical profession recognizing the opportunities which they have to guide in this sort of thing, I wish to present this resolution and in that manner place the interests of this Society before the House of Delegates:

"WHEREAS a President of the United States has deemed it wise to promote a national child health conference three times in the last twenty-five years, and

"WHEREAS these conferences have always stimulated interest in and improved standards for child health and protection, and

"WHEREAS the recent White House Conference on Child Health and Protection has so completely set forth the scientific facts pertaining to child health and protection and the gaps in their application from a national point of view, and

"WHEREAS no such formal effort has been made to coordinate health and welfare activities on behalf of Iowa children, therefore

"BE IT RESOLVED by the Iowa State Medical Society that the Governor of Iowa be requested to promote through existing agencies a conference on Child Health and Protection in Iowa.

"BE IT FURTHER RESOLVED that a copy of this resolution be sent to all agencies, official and voluntary, interested in child health and protection throughout the State."

Dr. Moore moved that the resolution be received. The motion was duly seconded and carried.

REPORT OF COMMITTEE ON INDIGENT PHYSICIANS

The Chairman called upon Dr. Hearst, Chairman of the Committee, for a report of the Committee on Indigent Physicians.

Dr. Hearst presented the following report:

A few weeks ago the Committee on Indigent Physicians was appointed. We have not had a chance to meet, but two of us met and decided the best way would be to ask the president of each County Society to report for his county. We have heard from about forty-five counties. I have heard indirectly from Woodbury County that there are some indigent physicians in that county. Only two have been reported in the state.

It has been intimated that if the bulls don't get busy in the stock market there will be more of this class.

In order to carry on the work of this committee we will have to have some money. The committee has not had an opportunity to discuss the matter, but two of us have thought of one or two methods. If the dues are to be raised, it is possible that there might be enough to take care of this work. The amount necessary cannot be determined until we know how many there might be who would need help.

I am told that the dentists have such an organization, with a national committee and branches in each

state. The national organization sends each dentist one hundred seals at Christmas time, for which he is supposed to return $1.00. They do not all respond, but so far the organization has had no difficulty in securing all the funds it needs.

This committee is not prepared to report further.

Motion was made and seconded to receive the report of the committee.

The Chairman called for discussion and Dr. Parker, Secretary, stated that in connection with the question of indigent physicians, he desired to call the attention of the House to that part of his report dealing with seventy-one inactive members, and his suggestion that the Society seek out all worthy retired physicians, who should be granted life membership in the Society.

The Chairman then stated that the House had heard the motion and the remarks of the Secretary and asked for any other remarks. The motion to receive the report was carried.

The Chairman then announced a recess of five minutes, after which the House reconvened at 3:50.

Dr. Gray, Secretary of the Committee on Necrology, rose to a point of privilege and stated that he was sorry to have omitted the names of five physicians who should have been included in his report: Their names were as follows: Frank E. E. St. Clair, Francis E. V. Shore, John M. Fulton, Edward T. Printz and Ulysses L. Hurt.

The Chairman then announced that the next order of business would be New Business.

The Secretary suggested that the House follow the program already gone through, and that under New Business it might be well to take up the suggestions and resolutions made in each of the reports. The first to be considered was the report of the Treasurer.

The Chairman brought to the consideration of the House the idea of the treasurer selling the Liberty Bonds and reinvesting the money in a new form of Liberty Bond, with the idea of making some money on the same.

The Treasurer stated that the matter would not have to be handled by motion; that it was entirely in the hands of the Treasurer.

The Chairman stated that he saw no harm, however, in getting an expression from the House of Delegates.

Dr. Gordon F. Harkness, Davenport, explained the situation further, after which Dr. Thomas F. Suchomel, Cedar Rapids, made the motion that the House of Delegates express its confidence in the Treasurer reinvesting the money of the State Society. Motion seconded and unanimously carried.

Dr. J. J. Brownson, Dubuque, called the attention of the House to the last paragraph of the report of the Councilor for the Sixth District and asked that the secretary explain under what authorization he could accept dues direct from members.

The Chairman ruled that the matter was not one for the consideration of the House of Delegates; that all such matters are referred to the Council or Councilors. He stated that Chapter VII, Section 3 of the By-Laws covered this situation: "Collectively, the Council shall be the Board of Censors of the Society. It shall consider all questions involving the rights and standing of members, whether in relation to other members, to the component societies, or to this Society. All questions of an ethical nature, whether brought before the House of Delegates, before a general meeting of the Society, or otherwise, shall be referred to the Council *without discussion.*"

Dr. S. T. Gray, Albia, asked the Chairman if the Council had authority over the action of the state officers.

The Chairman replied that the article just read covered the situation, and ruled that the discussion was out of order, and that the decision would stand unless there was an appeal from the decision of the Chairman.

The next order of business was the recommendation of the Trustees relative to raising the dues.

Dr. Thomas F. Suchomel, Cedar Rapids, moved that the report of the Trustees be accepted. Motion seconded.

Dr. M. J. Kenefick, Algona, raised the question as to whether an affirmative vote would raise the dues to $12.00. He expressed the doubt that the members from his county would favor the action and suggested the curtailment of some of the society activities rather than raising the dues.

Dr. W. W. Beam, Rolfe, stated that larger sums of money would be necessary in order to do the things necessary as a State Society and a constituent society of the American Medical Association.

Dr. C. B. Taylor, Ottumwa, called the attention of the House to the fact that in order to raise the dues, Chapter IX, Section 1 of the By-Laws would have to be amended, and suggested that the Trustees present a resolution to that effect.

Dr. F. A. Hennessy, Calmar, asked the Chairman the amount of the dues in surrounding states, which information Dr. Rohlf gave him.

Dr. E. C. Junger, Soldier, urged that something be done to get the newly licensed physicians to join the Society. He suggested lower dues for the new men, with insurance or some similar scheme to attract them and make it possible to raise the dues later.

Dr. E. B. Bush, Ames, expressed confidence in the report of the Trustees and in the necessity for raising the dues.

The Chairman ruled that an amendment to the By-Laws would have to be presented in writing to lay over one day and be voted on at the Friday meeting.

Dr. C. S. Kennedy, Logan, stated that it was a matter of production, and that the members would be willing to pay more dues if they could be made to see that they were getting their money's worth of service.

Upon motion of Dr. E. L. Bower, Guthrie Center, the previous question was put. Motion carried.

Dr. C. B. Taylor, Chairman of the Committee on

Constitution and By-Laws, submitted the following resolution to amend the By-Laws:

BE IT RESOLVED:

That the first sentence of Chapter IX, Section 1 of the Constitution and By-Laws be rescinded and the following adopted in lieu thereof:

Section 1. An assessment of twelve dollars ($12.00) per capita on the membership of the component societies is hereby made the annual dues of this Society.

The Chairman then ruled that it would not be necessary to vote on the resolution at that time.

The Chairman called for a consideration of the report of the Chairman of the Council relative to redistricting, as the next order of business.

Dr. C. A. Boice, Washington, suggested that this matter was embodied in the report of the Committee on Constitution and By-Laws.

Dr. T. A. Burcham, Des Moines, inquired of the Chairman if the acceptance of the report of the Council would include the redistricting.

The Chairman called attention to the resolution proposed by the Committee on Constitution and By-Laws.

Dr. C. A. Boice, Washington, moved the adoption of the resolution of the Committee on Constitution and By-Laws. At the request of the Chairman, Dr. Boice read the resolution:

Since there seems to be general sentiment prevailing throughout the state, and especially among the members of the Council, the officers of the State Society and many county officers, that the time has come to rearrange the Councilor districts, the Committee on Constitution and By-Laws has made a careful study of the problem and presents its recommendations in this report. The plan entails three steps: first, the actual rearrangement of districts; second, the provision for the election of Councilors for the reorganized districts; and finally, changing the word "congressional" to "Councilor" in two places in the By-Laws.

The redistricting plan proposed by the committee was published in the March, 1931, JOURNAL OF THE IOWA STATE MEDICAL SOCIETY in accordance with the following resolution adopted at a meeting of the committee held February 24, 1931: "Be it Resolved: That the Committee on Constitution and By-Laws go on record as favoring a redistricting of the state into eleven Councilor districts of nine counties each, with a view to facilitating the work of the Council and of the State Society and that a copy of the proposed redistricting be printed in the JOURNAL, together with a map showing the proposed districts." The map is reprinted as a part of this report.

Resolution Proposed for the House of Delegates

WHEREAS, The Constitution of the Iowa State Medical Society provides that there shall be eleven Councilors, and

WHEREAS, neither the Constitution nor the By-Laws makes any provision whatsoever regarding the counties comprising each Councilor district, and

WHEREAS, the present Congressional districts, which have for convenience been accepted as Councilor districts, are to be entirely changed and reduced to nine, and

WHEREAS, the automobile and the improved roads, connecting all county seats make practicable the formation of geographically compact districts, and

WHEREAS, the work of the Council can be greatly facilitated by the formation of districts of approximately uniform size and number of constituent counties,

THEREFORE, BE IT RESOLVED: That the present Councilor districts and the offices of Councilors as now constituted, be hereby vacated, and

BE IT FURTHER RESOLVED: That the House of Delegates hereby fixes the composition of the eleven Councilor districts of the Iowa State Medical Society as follows:

District No. 1—Allamakee, Winneshiek, Howard, Mitchell, Floyd, Chickasaw, Bremer, Fayette and Clayton counties.

District No. 2—Worth, Winnebago, Kossuth, Hancock, Cerro Gordo, Butler, Wright, Franklin and Humboldt counties.

District No. 3—Emmet, Dickinson, Osceola, Lyon, Sioux, O'Brien, Clay, Palo Alto and Pocahontas counties.

District No. 4—Buena Vista, Cherokee, Plymouth, Woodbury, Ida, Sac, Carroll, Crawford and Monona counties.

District No. 5—Hamilton, Webster, Calhoun, Greene, Boone, Story, Polk, Dallas and Guthrie counties.

District No. 6—Black Hawk, Grundy, Hardin, Marshall, Tama, Iowa, Benton, Poweshiek and Jasper counties.

District No. 7—Dubuque, Delaware, Buchanan, Linn, Jones, Jackson, Clinton, Cedar and Johnson counties.

District No. 8—Scott, Muscatine, Louisa, Washington, Jefferson, Henry, Des Moines, Lee and Van Buren counties.

District No. 9—Keokuk, Mahaska, Marion, Lucas, Monroe, Wapello, Davis, Appanoose and Wayne counties.

District No. 10—Warren, Madison, Adair, Adams, Union, Clarke, Taylor, Ringgold and Decatur counties.

District No. 11—Audubon, Shelby, Harrison, Pottawattamie, Cass, Montgomery, Mills, Fremont and Page counties, and

BE IT FURTHER RESOLVED: That, for the purpose of reorganization, the Councilors for the First, Sixth and Eleventh districts shall be elected for a term of one year; the Councilors for the Second and Seventh districts shall be elected for a term of two years; the Councilors for the Third and Eighth districts shall be elected for a term of three years; the Councilors for the Fourth and Ninth districts

shall be elected for a term of four years; the Councilors for the Fifth and Tenth districts shall be elected for a term of five years; and thereafter each Councilor shall be elected for a period of five years.

Dr. Boice then repeated his motion to adopt the resolution. Motion seconded.

The Chairman called for discussion.

Dr. Thomas F. Suchomel, Cedar Rapids, stated that the proposed redistricting plan was not approved by the members of the Linn County Medical Society, since it placed four strong societies in the Seventh District, and presented an amendment to the proposed resolution:

An Amendment to the Proposed Resolution for the Redistricting of the Councilor Districts of the State of Iowa

WHEREAS, The Constitution of the Iowa State Medical Society provides that there shall be eleven Councilors, and

WHEREAS, neither the Constitution nor the By-Laws makes any provision whatsoever regarding the counties comprising each Councilor district, and

WHEREAS, the present Congressional districts, which have for convenience, been accepted as Councilor districts, are to be entirely changed and reduced to nine, and

WHEREAS, the automobile and the improved roads, connecting all County Seats, make practicable the formation of geographically compact districts, and

WHEREAS, the work of the Council can be greatly facilitated by the formation of districts of approximately uniform size and number of constituent counties,

THEREFORE, BE IT RESOLVED: That the present councilor districts and the offices of the Councilors as now constituted, be hereby vacated, and

BE IT FURTHER RESOLVED: That the House of Delegates hereby fixes the composition of the eleven Councilor Districts of the Iowa State Medical Society as follows:

District No. 1—Allamakee, Clayton, Dubuque, Delaware, Buchanan, Fayette, Winneshiek, Howard, Chickasaw, Bremer, and Black Hawk counties.

District No. 2—Mitchell, Floyd, Butler, Hardin, Franklin, Cerro Gordo, Worth, Winnebago, Hancock, Wright, Humboldt and Kossuth counties.

District No. 3—Emmet, Palo Alto, Clay, Dickinson, Osceola, O'Brien, Lyon, and Sioux counties.

District No. 4—Plymouth, Cherokee, Buena Vista, Pocahontas, Sac, Ida, and Woodbury counties.

District No. 5—Calhoun, Webster, Hamilton, Marshall, Story, Boone, Greene, Guthrie, Dallas, and Polk counties.

District No. 6—Grundy, Tama, Poweshiek, Mahaska, Keokuk, Iowa, Benton, Linn, Johnson, and Washington counties.

District No. 7—Jones, Cedar, Jackson, Clinton, Scott, Muscatine and Louisa counties.

District No. 8—Des Moines, Lee, Henry, Jefferson, Van Buren, Davis, and Wapello counties.

District No. 9—Madison, Warren, Jasper, Union, Ringgold, Clarke, Decatur, Lucas, Wayne, Monroe and Appanoose counties.

District No. 10—Adair, Adams, Taylor, Montgomery, Page, Fremont and Mills counties.

District No. 11—Monona, Crawford, Carroll, Audubon, Shelby, Harrison, Cass, and Pottawattamie counties.

BE IT FURTHER RESOLVED: That, for the purpose of reorganization, the Councilors for the First, Sixth, and Eleventh Districts shall be elected for a term of one year, the Councilors for the Second and Seventh Districts shall be elected for a term of two years; the Councilors for the Third and Eighth Districts shall be elected for a term of three years; the Councilors for the Fourth and Ninth Districts shall be elected for a term of four years; the Councilors for the Fifth and Tenth Districts shall be elected for a term of five years; and thereafter, each Councilor shall be elected for a term of five years.

T. F. Suchomel, M.D.
A. W. Erskine, M.D.

Dr. Suchomel moved the adoption of the amendment to the proposed resolution. Motion seconded.

Dr. Thomas A. Burcham, Des Moines, asked Dr. Suchomel the advantages of his plan over the original one, who replied that it offered more distribution of medical strength in the eastern part of the state. He also stated that the towns and societies along the river had problems different from those of the towns and societies in the interior.

Dr. Burcham asked Dr. Suchomel to state those differences, and the latter replied that one was indigency, and another the direct connection of Scott and Clinton counties with towns in Illinois.

Dr. Burcham explained that the committee had endeavored to district the state according to accessibility rather than population.

Dr. C. B. Taylor, Ottumwa, stated that it would be impossible to devise a plan which would satisfy everyone, and that both the Constitution and By-Laws Committee and the Council had given the plan a very considerable amount of study.

Dr. W. N. Moore, West Branch, stated that the plan proposed by the committee would be more advantageous to Cedar county than the amendment proposed by the Linn County Society.

Dr. C. A. Boice, Washington, pointed out that in the plan proposed by the committee, a Councilor could be selected from almost any county in his district, and the other counties in his district would still be accessible.

Dr. J. I. Marker, Davenport, called the attention of the House to District Eight in the committee's plan, and stated that in the proposed amendment the counties were more accessible in the Eighth District.

Dr. Suchomel stated that in the Council's plan, only two districts had more than two large societies, Seven and Eight, and that the plan would place Linn county in competition with two counties farther away.

Dr. Taylor asked for the ruling of the Chairman

on the question of election of Councilors if the proposed plan were adopted.

The Chairman ruled that if a man's district is done away with, there is no district to serve, and stated that a reorganization would be necessary.

The Chairman asked for a vote on the amendment proposed by Dr. Suchomel.

Upon vote of the House, the amendment was lost.

Dr. Rohlf then called for a vote on the original plan.

Upon vote of the House, the resolution was unanimously adopted.

Upon request of the Chairman, Dr. Taylor, Chairman of the Committee on Constitution and By-Laws, presented the following amendments to the By-Laws, to be carried over and voted on at the next meeting.

Proposed Amendments to By-Laws

The Committee on Constitution and By-Laws would move that lines 3, 4 and 5, Section 2, Chapter V of the By-Laws of the Iowa State Medical Society be amended by striking out the word "Congressional" and substituting therefor the word "Councilor."

The Committee on Constitution and By-Laws would move that line 14, Section 2, Chapter V of the By-Laws of the Iowa State Medical Society be amended by striking out the words "in 1915 President also" and the parentheses surrounding these words.

The Chairman then asked that the proposed amendment be presented in writing, which Dr. Taylor agreed to do.

Dr. Boice reminded the Chairman that no action had been taken on vacating the present Councilor offices and election of new Councilors.

Dr. Jeanette Dean-Throckmorton, Librarian of the State Medical Library, upon invitation of the Chairman, then presented the following requests to the House of Delegates:

1. That they bring before their county societies the advisability of presenting to the State Medical Library the secretary's books of the county societies, in order that they might be available for historical reference.
2. Collections of pictures of doctors in three generations of direct descent.
3. Collections of old journals.
4. Old reprints.
5. Old instruments or things of historical value.
6. Assistance in procuring legislation in regard to postage on journals.
7. Assistance in procuring appropriation for Medical Library by legislation.

The Chairman then stated that he had erred in ruling that it was not necessary to vote on the resolution regarding dues at the first reading. He then asked that Dr. Taylor move the acceptance of the resolution, which Dr. Taylor did. Motion carried.

Dr. T. F. Suchomel, Cedar Rapids, moved that it be carried over for the Friday morning session. Motion carried.

The Chairman ruled that the next order of business would be consideration of the report of the Medical Economics Committee.

Dr. John I. Marker, Chairman of the Committee, moved that the first recommendation of the committee, that in regard to contract practice, be adopted. Motion carried.

Dr. Marker then moved the adoption of a second resolution:

"RESOLVED, That the House of Delegates of the Iowa State Medical Society instruct its delegates to the American Medical Association to call to the attention of that body the desirability of having the Bureau of Medical Economics of the American Medical Association make a study of contract practice."

Motion carried.

Dr. Marker then moved the adoption of a third resolution:

"WHEREAS, the Medical Education and Hospitals Committee found that in many cases state patients were being committed to the university hospitals without due regard for the urgency of the case, the indigency of the patient or teaching needs, and

"WHEREAS, it is also reported that in some localities physicians are certifying as cost patients persons who are in fact able to pay a professional fee at home, and

"WHEREAS, Linn and Wapello counties have in operation a plan which seems to eliminate these difficulties,

"THEREFORE, BE IT RESOLVED that the House of Delegates of the Iowa State Medical Society recommend that each component county society should endeavor to arrange with the district court for the creation of a committee of the local medical society which should examine and pass upon all state patients and which committee should also certify cost patients to the university hospital authorities, and that the examination fees so received should be turned in to the treasury of the county society."

Motion was seconded.

Dr. T. F. Suchomel, Cedar Rapids, stated that in the third "Whereas" of the resolution, there was an erroneous idea that Linn and Wapello counties had the same plan, and that the arrangement whereby examination fees were turned into the county society treasury might not be successful in all counties. Dr. Suchomel submitted the following resolution, to obviate this situation:

A Resolution to Amend the Resolution for the Examination and Certification of Indigents

WHEREAS, the Medical Education and Hospitals Committee found that in many cases state patients were being committed to the University Hospitals without due regard for the urgency of the case, and the indigency of the patient, or teaching needs, and

WHEREAS, it is also reported that in some localities, physicians are certifying as cost patients, persons who are in fact able to pay a professional fee at home, and

WHEREAS, Linn and Wapello counties have in operation plans which seem to eliminate these difficulties,

THEREFORE, BE IT RESOLVED: That the House

of Delegates of the Iowa State Medical Society recommend that each component county society should endeavor to arrange with the District Court for the creation of a committee of the local medical society which should examine and pass upon all state patients and which committee should also certify cost patients to the University Hospital authorities, and that the examination fees, or such part thereof as may be designated by the county society, so received, should be turned into the treasury of the county society.

T. F. Suchomel, M.D.
A. W. Erskine, M.D.

Dr. Suchomel moved the adoption of the amendment. Motion seconded.

Dr. Arthur W. Erskine, Cedar Rapids, then stated that the Linn County Medical Society had directed its delegates to present in detail the Linn county plan. He then read the resolution by which the Linn County plan was adopted:

BE IT RESOLVED: That, in order to promote a better selection of proper teaching material for the Medical Department of the State University of Iowa, and more efficient and economical administration of the laws relating to medical and surgical treatment of indigent persons, and to increase the revenues of the Linn County Medical Society, the officers of the society shall be directed and authorized to examine, on behalf of the society, all indigent persons applying for commitment from Linn County to the University Hospital under the provisions of Chapter 199 of the 1924 Code of Iowa, and to collect the fee therefor, in the manner hereinafter provided.

1. *Method of Examination.* Each indigent person applying for commitment shall be examined by a member of a committee appointed by the president. The membership of such committee shall consist of such members of the Linn County Medical Society as shall indicate to the secretary their willingness to serve on it and to accept for their services such compensation as is hereinafter provided.

2. *Duties of the Secretary.* The secretary shall receive from the proper official of the court all forms entitled "Commission Appointing Physician" and "Report of Physician" issued to indigent persons applying for commitment, shall notify such indigent persons of the time and place of their examination, and shall distribute the labor of making the examinations, and the compensation therefor, equally and ratably among the members of the committee. When more than one person is examined on the same occasion, the secretary is authorized to furnish, at the expense of the society, sufficient clerical help to facilitate making the examinations and recording the findings thereof. The secretary shall, on behalf of the society, sign the statement for services rendered in the physician's report, and collect and remit to the treasurer of the society the fee of $5.00 for each examination as provided by law.

3. *Duties of the Treasurer.* The Treasurer of the society shall, in the manner provided in the By-Laws of the Linn County Medical Society, pay the sum of $1.00 for the examination of each indigent person applying for commitment, to the member of the committee making such examination. At the end of a year, the treasurer shall pay to the secretary of the society, an honorarium of $200.00 as compensation for the labor of carrying out the provisions of this resolution.

BE IT FURTHER RESOLVED, that when the exigencies of the situation seem to make such action more desirable and feasible, and especially when requested by the attending physician, the officers of the society, at their discretion, may refer a patient to his attending physician for examination whether or not he may be a member of the examining committee.

BE IT FURTHER RESOLVED, that when, because a patient is confined to bed in a rural district or some place remote from the usual place of making the examination, or when because of some other condition, an extraordinary amount of labor is required to make the examination, the officers of the society, at their discretion, may remit to the member of the society making such examination, the fee of $5.00 in full; and

BE IT FURTHER RESOLVED, that a copy of this resolution be transmitted to the House of Delegates of the Iowa State Medical Society by the delegates of the Linn County Medical Society.

Dr. Erskine also read the comment of the Linn County Medical Society secretary in regard to the working of the plan:

Comment of Secretary

Linn County's Examinations under the Perkins Haskell-Klaus Law.

Method (See Resolutions)

1. Nonemergency cases.

The Court allows applications to be made out on Mondays. The judge appoints the secretary of the County Society as the examining physician in every case. The applicants if ambulant are referred to a local hospital for examination at 9:00 a. m. Tuesdays. The county secretary is advised at 5:00, Monday afternoon, as to each case; the name, address, family physician and whether ambulant. The secretary assigns committee members in rotation, one for every three or four patients, to make the examinations in the outpatient department of the local hospital. The secretary assigns bedfast cases to members of the committee for examination in their homes. The family physician is assigned in special cases only. Examples of these cases are: patients with venereal disease, girls with gynecologic disorders, exceptionally nervous patients or cases of great emergency. In small towns the family physician is assigned if possible.

2. Emergency cases.

The attending physician is asked to call the secretary of the County Society giving details of the case. The secretary phones the University Hospital. If a bed is available the judge is notified and he issues papers on proper application and check of the legal residence and indigency of the applicant.

All papers are signed by the secretary. A rubber stamp calls the attention of the University Hospital authorities to the name of the attending physician, who is to receive all reports.

The secretary before signing the papers calls the family physician to ask his diagnosis and whether he considers the patient to be indigent. If he is doubtful a note to the Court advises that the indigency should be investigated and the statement of indigency in the physician's report is crossed out.

Difficulties.

1. Specialists are not called equally with general practitioners on routine examinations because

(a) Nature of illness is not usually known to the secretary when assigning cases.

(b) If only three persons are to be examined on one morning it does not pay to send for one pediatrician, one head specialist and one physician in general practice to be in attendance.

2. A patient who is a legal resident of Linn county may have an attending physician living in another county. This has actually occurred only once to date and in this instance the Court was asked to appoint the attending physician to examine the case.

3. Attending physicians who are not members of the society and whose patient lives at a distance from any committee member may occasion difficulties. If they are cooperative the papers are signed by the secretary and sent to them and they are given the one dollar fee. The noncooperative ones are few. Possibly assigning a few of their patients to their competitors will make the noncooperative ones realize that they should conform to the plan as well as the members of the County Society do.

4. Some difficulty arises when the diagnoses of the family physician and of the committee physician are at variance. If either considers the case urgent the case is referred to the University Hospital at once.

5. The attending physician is under duress at times to urge the secretary to ask for emergency admission of a patient when the family or economic situation and not the medical condition constitutes the emergency. In some of these cases an early examination in the out-patient department has satisfied the patient. Such difficulties arise under any system.

The cooperation of the Court, the hospital authorities and the great majority of the physicians has made the plan work.

Dr. R. W. Stahr, Fort Dodge, advised the careful consideration of the plan before its adoption.

Dr. C. S. Kennedy, Logan, stated that the state should not burden itself with the care of patients who should not be sent to Iowa City.

Dr. M. J. Kenefick, Algona, stated that he did not believe the Cedar Rapids plan would work in rural districts.

Dr. E. B. Howell, Ottumwa, explained the Wapello county plan.

Dr. Suchomel remarked he was asking for a vote on whether the House would *recommend* the plan; without intent to force it on the societies.

Dr. E. B. Bush, Ames, suggested killing both resolutions, since each county must work out its own problems.

Dr. F. E. Bellinger, Council Bluffs, asked that the House be careful in passing a resolution which would be a blanket order on the state.

Dr. E. B. Howell, Ottumwa, moved that both resolution and amendment be laid on the table. Motion carried.

A rising vote was called for. Ayes: 48. Nays: 12.

The Chairman then suggested that the Nominating Committee be organized and begin its work.

The time then being 5:30 p. m., Dr. William Jepson moved that the House adjourn until 7:30. Motion seconded and unanimously carried.

EVENING MEETING, TUESDAY, MAY 12

The House of Delegates reconvened in the Oak Room of the Hotel Fort Des Moines and was called to order by President Rohlf at 7:40 p. m.

The Secretary read the names of the Nominating Committee, selected by the delegates from their various districts.

First District—Dr. M. C. Mackin, Mt. Pleasant.
Second District—Dr. N. G. Alcock, Iowa City.
Third District—Dr. John F. Loeck, Aurora.
Fourth District—Dr. F. A. Hennessy, Calmar.
Fifth District—Dr. T. F. Suchomel, Cedar Rapids.
Sixth District—Dr. E. B. Howell, Ottumwa.
Seventh District—Dr. Thomas A. Burcham, Des Moines.
Eighth District—Dr. Carl E. Sampson, Creston.
Ninth District—Dr. E. A. Moore, Harlan.
Tenth District—Dr. R. W. Stahr, Fort Dodge.
Eleventh District—Dr. R. B. Armstrong, Ida Grove.

The Secretary asked that the Nominating Committee watch the bulletin board in the Assembly Room in the morning for announcement as to the time and place of meeting

The Chairman then called upon Dr. Marker to continue with his report.

Dr. Marker referred to the recommendation made by the committee with regard to group insurance:

"RESOLVED, that the House of Delegates of the Iowa State Medical Society recommend to the Trustees for favorable consideration the purchase of group malpractice insurance at a net cost of not to exceed $15.00 per member and that the premium upon such insurance shall be paid by the members simultaneously with the payment of their dues."

Dr. Marker stated that in order to get the resolution before the House and properly investigated, the committee wished to substitute the following resolution:

RESOLVED, that the House of Delegates of the Iowa State Medical Society recommend to the Trustees and the Medico-Legal Committee for consideration, the purchase of malpractice insurance for the members of the Iowa State Medical Society, and, that

the premium upon such insurance shall be paid by the members to an agent of the company simultaneously with the payment of their dues

Dr. Marker moved the adoption of the substitute resolution.

The Chairman explained that the resolution was to be referred to the Board of Trustees and Medico-Legal Committee for further consideration, to be reported at a future meeting of the House of Delegates.

Upon motion being seconded and carried, the resolution was adopted.

Dr. Marker presented the resolution of the committee concerning the fee bill, which he explained was not a minimum fee bill, but an average fee bill:

"RESOLVED, that the recommended fee bill submitted May, 1931, by the Medical Economics Committee of the State Medical Society be recommended to the favorable consideration of each component County Society with a view to its adoption."

The Chairman called for discussion. Upon motion being seconded and carried, the resolution was adopted.

Dr. E. L. Bower, Guthrie Center, moved that the Chairman appoint an advisory committee of five members to work with the Women's Auxiliary. Motion seconded and carried.

The Chairman then called for discussion of the report of the Committee on Medical Education and Hospitals, and asked that the Chairman report, clarify and discuss what had been termed "Proposed Plan of Action."

Dr. Eiker explained that it would not be advisable to attempt to cover the entire plan in one motion, and moved that the first three paragraphs of the report be adopted. Motion seconded and carried.

Dr. Eiker then moved that the House adopt the remainder of the report, in order to open it up for discussion. Motion seconded.

Dr. Paul E. Gardner, New Hampton, raised the question as to who composed the Department of Health, which was answered by Dr. Frank M. Fuller, Keokuk, who asked the privilege of the floor.

Dr. Eiker agreed that the Commissioner of Health, State Board of Medical Examiners and State Board of Health should be designated.

Dr. Burcham raised the question as to whether or not the report called for a special meeting of the House of Delegates.

After considerable discussion by Dr. Burcham, Dr. Eiker and Dr. Harkness regarding the advisability of a special session of the House of Delegates, or a called meeting of the county society presidents and secretaries, and the expense thereof, Dr. Eiker suggested that Section 2 be amended by inserting after the word "determine," the sentence, "Said members shall attend without expense to the Iowa State Medical Society."

Dr. C. A. Boice, Washington, called attention to the typographical error on page 59 of the handbook which referred to a meeting in "1992."

Dr. George C. Albright, Iowa City, raised the question as to whom Dr. Eiker meant by "all members of the Medical College of the Iowa State University."

Dr. Eiker explained that the committee meant to include only the faculty.

Dr. Albright raised the question of the cost of printing the suggested amendments, modifications and alterations, as set forth in Section Two of the Proposed Plan of Action, and said that the extremely commendable piece of work which the committee had done would be sufficient guarantee to the House of their ability to select the proper material for publication.

Dr. Eiker stated that it should be referred to the Committee on Public Policy and Legislation.

The Chairman asked for a motion to discuss the report seriatim.

Dr. George C. Albright, Iowa City, made the substitute motion that the proposed plan of action submitted by the Committee on Medical Education and Hospitals be discussed seriatim. Motion seconded. Carried.

Dr. Eiker moved that that part of Section One which related to the Iowa State Department of Health should include only the Health Commissioner and the Iowa State Board of Medical Examiners, and that the members of the Medical College should include only the faculty of the College of Medicine of the Iowa State University. Seconded and carried.

Dr. Harkness moved that November first be substituted for October first and that the editing be left to the Committee on Public Policy and Legislation. Seconded and carried.

Dr. Eiker moved that the last sentence of Section One be amended to read as follows: "The Committee on Public Policy and Legislation of the Iowa State Medical Society shall have an unsigned copy of all said amendments, modifications or alterations, submitted to them in the form and manner above described, and of which they approve, printed in the November, 1931, number of the JOURNAL OF THE IOWA STATE MEDICAL SOCIETY." Motion seconded and carried.

Dr. Eiker moved the adoption of Section Two. Motion seconded.

Upon the suggestion of Dr. C. S. Kennedy, Logan, Dr. Eiker moved that the word "November" be substituted for the word "October" in the last sentence of Section Two. Motion seconded and carried.

Dr. Eiker moved that Section Two be amended by adding after the third sentence, "Said members shall attend without expense to the Iowa State Medical Society." Seconded and carried.

Dr. Gordon F. Harkness pointed out that as the section stood, a meeting of the presidents and secretaries was obligatory upon the Society, without expense, and moved that Section Two should be amended by changing the first sentence to read, "A special meeting during the winter of 1931-1932 shall be called at the discretion of the President and this meeting shall be either a meeting of the House of Delegates or a meeting of the presidents and secretaries, as he may deem best."

After discussion by Dr. Eiker and Dr. Gray, Dr.

Eiker moved that in the first line of Section Two the words "in December, 1931" be stricken and that all that part of Section Two beginning in line 5 with the word "To" and ending at the period in line 9, be stricken. Dr. Harkness rose to a point of order and withdrew his previous motion. Motion by Dr. Eiker seconded and carried.

Dr. Eiker moved that Section Two as amended be adopted. Motion seconded and carried.

Dr. Eiker moved that all that part of Section Three included in the parentheses beginning in line 4 be stricken. Motion seconded and carried.

Dr. Eiker moved that Section Three be amended so as to read:

"The Committee on Public Policy and Legislation of the Iowa State Medical Society shall have the amendments, modifications and alterations in the state laws (as suggested and agreed upon in the meeting arranged for in Section Two) published in an early issue of the JOURNAL OF THE IOWA STATE MEDICAL SOCIETY. These amendments, modifications and alterations, as published, shall be presented to the House of Delegates of the Iowa State Medical Society at the regular annual meeting in 1932, by the Committee on Public Policy and Legislation," and that Section Three as amended and read be adopted. Motion seconded and carried.

Dr. Eiker moved that Section Four be amended so as to read as follows:

"Section Four. The House of Delegates of the Iowa State Medical Society at their regular annual meeting in 1932, may amend, revise, or modify the changes suggested in the law as published in the JOURNAL OF THE IOWA STATE MEDICAL SOCIETY, as provided for in Section Three, and make such other changes as in their wisdom are needed at that time. Their final action at the 1932 regular annual meeting of the Iowa State Medical Society shall be prepared in proper form by the Committee on Public Policy and Legislation, and by them published, circulated and distributed as they deem proper, and by them presented to the Iowa State Legislature, which convenes in January, 1933." Seconded and carried.

Dr. Eiker moved the adoption of Section Four as amended. Motion seconded and carried.

Dr. Eiker then moved the adoption of the entire recommendations of the committee as amended. Motion seconded and carried.

Dr. Arthur W. Erskine, Cedar Rapids, asked Dr. Suchomel to read a resolution from the Linn County Medical Society, as follows:

WHEREAS, the Report of the Committee on Medical Education and Hospitals of the Iowa State Medical Society show that

"The fact that the cost to the county per patient day for indigent patients in private hospitals averages $2.70 while the cost in the University Hospitals is $3.68 indicates that the private hospitals are rendering such services at less than cost," and

WHEREAS, the practice of rendering hospital service to county patients at less than cost is contrary to public policy and inflicts unnecessary and inequitable hardships on private and religious charities, therefore,

BE IT RESOLVED, that the Iowa State Medical Society deplores and condemns such practice and urges that it be discontinued, and,

BE IT FURTHER RESOLVED, that a copy of this resolution be sent by the secretary to the secretary of the Iowa State Hospital Association.

Dr. Suchomel moved the adoption of the resolution. Motion seconded and carried.

The Chairman then asked Dr. McManus to say a few words about the Speakers Bureau.

Dr. McManus made the following remarks:

Members of the House of Delegates:

This is new work to me, and I did not know what the President had in mind. You have the printed report of the Committee. The summary of it is the thing which should interest you. Scattered through the report is an outline of the work done. As you know, the Speakers Bureau has provided speakers for many of the county and district societies, and conducted during the year University extension courses which were given in five centers, the enrollment being about 190. The previous year in two centers there had been an enrollment of about 94. In all, about 285 men of the state have been matriculated at these courses. The cost to the society has been nothing; in fact, there has been a revenue to the Society from that source; a revenue of approximately $1,500.00. I mention that fact to criticize it, as I think that was not intended by the man who wrote the report. I submit to you that men who take the University extension work should not be penalized for so doing. Taking advantage of this opportunity should not be made a source of revenue to the society. I think that goes without discussion. In some way this money should revert to the Committee for the perpetuation of the work that the Committee is doing. Whether it will or will not of course will depend upon the wish of the Trustees.

Besides the University extension courses, many programs have been provided for county and district societies, many of the men have contributed very freely and very usefully indeed to the advancement of this work. New problems will come up very naturally; the problem of whether the work shall be continued and the problems that are constantly coming before the Committee in regard to the relations between the profession and lay societies of all sorts that are attempting to dabble in the work. They all have their notions as to how it should be done, and most of them feel that they know more about it than the medical profession. They are not altogether to blame. They came into an unoccupied field. The medical profession was just a little bit late in getting in, and now they consider us intruders in what we believe to be our field. This brings up the problems which will of necessity be for the Committee to solve. The first thing that the Committee will want to know is whether you want the work continued, or whether you feel that you have had enough of it, and should adjourn and turn the revenue over to the Society.

The Chairman then called for a motion to approve the work of the Committee and to continue that work.

Dr. Paul E. Gardner, New Hampton, moved that the work of the Committee be continued. Motion seconded and carried.

Dr. T. F. Suchomel, Cedar Rapids, announced that he had four resolutions to present from Linn County.

Dr. Suchomel read the first resolution, as follows:

WHEREAS, the report of the Committee on Medical Education and Hospitals of the Iowa State Medical Society shows that

"The resolution adopted by the Board of Education, limiting private patients to approximately 5 per cent of the total bed capacity of the hospitals, is being substantially adhered to. The University authorities have agreed to the proposition that private patients should pay fees commensurate with those charged in private practice in the state. The Board of Education has accepted the general principle that such patients shall be held available for teaching purposes," therefore

BE IT RESOLVED, that the Iowa State Medical Society approves such actions of the Board of Education and the Hospital Authorities as being conducive to the cause of medical education, the welfare of the people of the State, and the best interests of the University and the medical profession, and

BE IT FURTHER RESOLVED, that a copy of this resolution be sent by the secretary to the secretary of the Board of Education and to Dean H. S. Houghton.

Dr. Suchomel moved the adoption of the resolution. Motion seconded and carried.

Dr. Suchomel then read the second resolution, as follows:

WHEREAS, the report of the Committee on Medical Education and Hospitals of the Iowa State Medical Society shows that

"In the limited time at the disposal of the committee, it was of course, impossible to make a detailed study of prices paid at the present time and in the past. However, a few standard items, the prices of which have not materially fluctuated, were selected by the committee and the prices paid in January, 1928, were compared with those paid in March, 1930." The results of the comparison as shown in Table XIX, page 31, of the committee's report show that marked economies have been effected in the purchase of supplies for the hospitals during the term of the present administrator, Robert E. Neff, therefore,

BE IT RESOLVED, that the Iowa State Medical Society approves such economies.

BE IT FURTHER RESOLVED, that a copy of this resolution be sent by the secretary to each member of the State Legislature and to Robert E. Neff and to the Governor of the State.

Dr. Suchomel moved the adoption of the second resolution. Motion seconded and carried.

Dr. Suchomel then read the third resolution, as follows:

WHEREAS, the report of the Committee on Medical Education and Hospitals of the Iowa State Medical Society shows that

"It seems that Sections 4027 and 4028 of Chapter 199 of the 1924 Code of Iowa do not limit the monies to be spent in carrying out the provisions of this act, which are requirements as far as the hospital is concerned, and that it is obligatory to accept all patients properly committed as long as there is an available bed in the hospital regardless of specific legislative appropriations, and

"WHEREAS, The University Hospitals are adequate in size and design to care for all the properly committed indigent patients of the state, and to meet the teaching needs of the medical school of, at present, 500 students, and

"WHEREAS, the plan now in force of operating the hospitals at two-thirds capacity is uneconomical and extravagant, and the limitation of beds under this plan of operation is one of several factors which have increased the number of patients on the waiting list to about 2,000, and the limitation of indigent beds to two-thirds capacity reduces the teaching material to an amount insufficient to supply the needs of a school of the present size," therefore,

BE IT RESOLVED, that the Iowa State Medical Society deplores and condemns the plan of operating the hospitals at two-thirds capacity, and favors and urges the appropriation of sufficient funds to enable the hospitals to operate efficiently and economically, to serve the needs of medical education, and to care for the properly committed indigent sick and crippled of the State, and

BE IT FURTHER RESOLVED, that a copy of this resolution be sent by the secretary to each member of the State Legislature.

Dr. Suchomel moved the adoption of the third resolution.

Dr. E. B. Williams, Montezuma, objected to the resolution, stating that it belonged to the business of the recently adjourned session of the Legislature.

Dr. T. A. Burcham, Des Moines, opposed the resolution on the ground that it endeavored to place the Society on record as favoring an increase in the appropriation for the University Hospitals.

Dr. C. A. Boice, Washington, moved that the resolution be laid on the table. Motion seconded and carried.

Dr. Suchomel then read the fourth resolution, as follows:

WHEREAS, the report of the Committee on Medical Education and Hospitals of the Iowa State Medical Society shows that some evils in connection with the operation of the Perkins, Haskell-Klaus law are chargeable to the examining physician or those who certify cost patients; and that evidence has been found of abuse of Section 4014 of the law pertaining to emergency cases, which have preference over other cases in order of admission to the hospitals; cases are represented to be such when they really are not, and that in every community there seems to be some individuals who seek to take advantage of lenient judges and obtain medical care and treatment to

which they are not rightly entitled, and that some social workers, apparently to make a good showing for their organizations and to save money for the county, send patients to the University Hospitals who have no value for teaching purposes, and who could be treated as efficiently and much more economically at home, therefore,

BE IT RESOLVED, that the Iowa State Medical Society favors, as tending to minimize and correct such evils and abuses, some plan of examination of indigent persons by component county societies rather than by individual physicians.

Dr. Suchomel moved the adoption of the resolution. Motion seconded.

Dr. C. S. Kennedy, Logan, stated that he was opposed to the resolution.

Dr. E. B. Williams, Montezuma, stated that it came under the same category as the previous resolution.

Dr. Williams moved that the resolution be laid on the table. Motion seconded and carried.

Dr. Rohlf called on Dr. Moore for a second reading of the resolution regarding the White House Conference.

Dr. Moore moved the adoption of the resolution. Motion seconded.

Dr. C. S. Kennedy, Logan, asked if the medical profession would be the dictators and leaders in any plan of procedure.

Dr. Moore replied that to make them so was the purpose of the resolution.

Motion carried.

Dr. Parker, Secretary, moved that the Chairman appoint a special committee of five members on Child Health and Protection. Seconded and carried.

Dr. I. N. Crow, Fairfield, moved that the Committee on Medical Education and Hospitals, having completed their duties, be discharged.

Motion seconded and carried.

Dr. Parker moved that the meeting adjourn until Friday morning at eight o'clock, unless it might seem wise that a meeting be called before that time. Motion seconded and carried, and the meeting adjourned at 9:30.

THIRD MEETING, THURSDAY, MAY 14

The House of Delegates of the Iowa State Medical Society met in the West Ballroom of the Hotel Fort Des Moines, at 1:00 p. m.

The Chairman ruling that a quorum was present, after roll call by the Secretary, stated that the meeting had been called for the specific purpose of voting on the resolution regarding redistricting, which was received at the first meeting. This was essential, in order that Councilors might be elected for the new Councilor districts.

The Chairman requested that the Secretary read the resolution pertaining to Councilor redistricting, including the first of the two proposed amendments to the By-Laws, which the Secretary did.

The Chairman asked for a vote on the resolution as read.

Dr. W. E. Baker, Des Moines, moved the adoption of the resolution. Motion seconded and carried, and the resolution adopted.

Dr. Thomas A. Burcham, Des Moines, asked for instructions to the Nominating Committee regarding new Councilors.

The Chairman instructed the Nominating Committee to report the first thing at the eight o'clock meeting Friday morning.

Upon motion duly seconded and carried, the meeting adjourned at 1:25 p. m.

FOURTH MEETING, FRIDAY, MAY 15

The House of Delegates convened for its fourth session in the Oak Room of the Hotel Fort Des Moines on Friday morning, May 15. President Rohlf called the meeting to order at 8:05. Roll call showed the presence of 53 delegates and 4 officers, making a total of 57. The President announced that a quorum was present.

The secretary read the minutes of the preceding meetings, which on motion duly seconded and carried, were approved as read.

The President called for the report of the Committee on Nominations, which was presented by Dr. E. A. Moore, Harlan, Secretary of the Committee:

Report of Committee on Nominations

Your Committee recommends the following nominations:

Officers

President elect: C. A. Boice, Washington; B. L. Eiker, Leon; Charles B. Taylor, Ottumwa.

First vice president: Prince E. Sawyer, Sioux City.

Second vice president: J. Fred Clarke, Fairfield.

Councilors: First District, Felix A. Hennessy, Calmar; Second District, L. R. Woodward, Mason City; Third District, Frank P. Winkler, Sibley; Fourth District, William Jepson, Sioux City; Fifth District, W. W. Pearson, Des Moines; Sixth District, W. L. Hearst, Cedar Falls; Seventh District, A. W. Erskine, Cedar Rapids; Eighth District, C. A. Boice, Washington; Ninth District, H. A. Spilman, Ottumwa; Tenth District, J. G. Macrae, Creston; Eleventh District, A. V. Hennessy, Council Bluffs.

Trustee: O. J. Fay, Des Moines.

Delegate to A. M. A.: Fred Moore, Des Moines.

Alternate to A. M. A.: N. G. Alcock, Iowa City.

Standing Committees

Medico-Legal Committee: F. Earl Bellinger, Council Bluffs.

Public Policy and Legislation: Thomas A. Burcham, Des Moines; Frank L. Williams, Des Moines; Peter A. Bendixen, Davenport.

Constitution and By-laws: Charles B. Taylor, Ottumwa; John H. Peck, Des Moines; Frederick J. Swift, Maquoketa.

Finance: Ernest C. McClure, Bussey; R. L. Barnett, Atlantic; Andrew W. Bennett, Iowa City.

Special Committees

Medical Library: F. A. Hennessy, Calmar; Conrad R. Harken, Osceola; Leroy M. Downing, Cedar Rapids.

Military Affairs: Donald Macrae, Council Bluffs; H. A. Spilman, Ottumwa; Earl B. Bush, Ames.

Medical Economics: John I. Marker, Davenport; Ratford F. Childs, Audubon; Corwin S. Cornell, Knoxville; James C. Donahue, Centerville; Isaac E. Nervig, Sioux City.

Medical Education and Hospitals: Your Committee recommends that this be made a standing committee:

Historical: Walter L. Bierring, Des Moines; Frank M. Fuller, Keokuk; William Jepson, Sioux City; Arthur D. Woods, State Center; John T. McClintock, Iowa City.

Speakers Bureau: Daniel J. Glomset, Des Moines; Thomas U. McManus, Waterloo; John C. Shrader, Fort Dodge.

Nurses Training: Ira N. Crow, Fairfield; Robert Crumpton, Webster City; F. A. Gillett, Oskaloosa.

Your Committee recommends that the next meeting be held at Sioux City, Iowa.

E. A. Moore, Secretary.

The President ruled that the House would take the liberty of voting for the Councilors first, in order that they might have the right to vote with the House.

Dr. T. F. Suchomel, Cedar Rapids, moved that the Secretary be instructed to cast the unanimous ballot of the House of Delegates for the list of Councilors as presented by the Nominating Committee. Motion seconded and carried unanimously.

The Chairman appointed the following men to act as tellers during the balloting for President-Elect: Dr. E. C. McClure, Bussey; Dr. Bruce Ensley, Shellrock; Dr. William L. Hearst, Cedar Falls. The votes cast on the first ballot were as follows: Eiker, 26; Taylor, 20; Boice, 8. None of the candidates having received a majority of the 54 votes cast, the President declared there had been no election.

The Chairman called attention to the fact that the Nominating Committee had brought in a Committee for the Speakers Bureau and a Committee on Nurses Training, and stated that since these committees were functions of the Council, they would be chosen by the Councilors rather than by the House of Delegates.

Dr. Suchomel, Cedar Rapids, moved that that part of the Nominating Committee's report dealing with these committees be stricken. Motion seconded and carried.

The results of the second ballot for President-Elect were as follows: Eiker, 33; Taylor, 21; Boice, 1. The Chairman announced the election of Dr. Eiker as President-Elect.

Dr. T. F. Suchomel, Cedar Rapids, moved that the Secretary be instructed to cast a unanimous ballot for the remaining names on the Nominating Committee's report, and that that part of the report dealing with the Medical Education and Hospitals Committee be referred to the Committee on Constitution and By-Laws.

At the request of the President, Dr. Suchomel divided his motion as follows:

Moved that the Secretary be instructed to cast a unanimous ballot for the remainder of the names submitted by the Nominating Committee. Motion seconded and unanimously carried.

Moved that the recommendation of the Nominating Committee relative to making the Committee on Medical Education and Hospitals a standing committee, be reported to the Committee on Constitution and By-Laws for consideration at the next meeting of the House of Delegates. Motion seconded.

Dr. Suchomel explained that the Nominating Committee felt that there should be a state society Committee on Medical Education and Hospitals to correspond to a similar committee of the American Medical Association.

Dr. T. A. Burcham, Des Moines, remarked that it was not the intention of the Nominating Committee that the formation of a standing Committee on Medical Education and Hospitals would mean further investigation of the State University, but that its function would be to study certain problems pertaining to medical education, nurses' training, etc., and to supplement the work of the National Committee.

Dr. Suchomel's motion carried.

The Chairman then called for reports of committees.

Dr. Burcham called attention to the recommendation of the Nominating Committee that the next meeting be held at Sioux City, and said that as a delegate from Polk County he extended to the Society an invitation to hold the meeting in Des Moines whenever it wished, and that the Society would always be welcome in Des Moines.

The Secretary announced that he had a number of telegrams, mostly from Sioux City, but a number also from Davenport.

Dr. William Jepson repeated the invitation of the Woodbury County Medical Society to hold the meeting in Sioux City, and said that if any other city wished to have the meeting, Sioux City did not want to stand in its way, but that the Society would be most welcome in Sioux City, and that the members there would do everything in their power to entertain the Society during the session.

The Chairman asked for a vote on the recommendation of the Nominating Committee. The vote was unanimously affirmative.

Dr. Channing G. Smith reminded the Chairman that it would be necessary to select a time of meeting.

The Chairman ruled that that would be left for later action of the officers, because of possible conflict with other meetings.

Dr. E. B. Winnett suggested that the date of meeting be left to the discretion of the officers.

Dr. M. J. Kenefick called the attention of the House to Chapter II, Section 1 of the By-Laws, which would seem to require that the date be fixed at the time of the annual session.

Dr. William Jepson moved that the date of the next annual meeting be some time in May, 1932. Motion seconded and carried.

The Chairman then called for the discussion of unfinished business.

Unfinished Business

Dr. William Jepson stated that as a delegate to the American Medical Association, he, in common with two other delegates, wished to carry out the express wish of the Society in whatever activities it undertook to sponsor. He mentioned two matters concerning which the delegates had been instructed: first, the findings of the Committee on Medical Economics, which were to be carried to the A. M. A. as sponsored by the delegates, and presumably sought to be inaugurated as the express wish of the profession of the country.

He further stated that since the problems of rural districts differed so radically from those of the larger cities, and since the activities of the State Society had not progressed far enough to have a definite plan to lay before the A. M. A., he asked to be relieved of that part of his duty.

The second matter he discussed was the candidacy of Dr. Walter L. Bierring of Des Moines for President of the American Medical Association. Dr. Jepson stated that as delegate to the A. M. A. he would do everything in his power to see that that honor came to Iowa and to Dr. Bierring, and asked that he be notified if any member of the House of Delegates of the Iowa State Medical Society found any objections to such action.

Dr. Channing G. Smith moved that the House of Delegates of the Iowa State Medical Society unanimously instruct its delegates to the American Medical Association to support by every honorable means the candidacy of Dr. Bierring. Motion seconded and carried.

The Chairman stated that the House must dispose of the motion relative to the change in the By-Laws necessary in connection with the increase of dues.

Dr. Burcham moved that the House of Delegates accept the change in the Constitution and By-Laws as read by the Secretary. Motion seconded.

Dr. William Jepson moved an amendment to the effect that the dues be increased for the ensuing year to $12.00, at the end of which time it shall again be decided what the dues shall be for the next year. Motion seconded.

Dr. W. N. Moore, West Branch, asked for instructions from the House of Delegates regarding the reasons for the raising of the dues, which he could carry back to the Cedar County members.

Dr. C. S. Kennedy, Logan, stated that it was a matter of production; that for the first time, the State Society and its Legislative Committee were showing results in the society's fight against quackery, and it was his opinion that because of those results, the members would be willing to pay the increased dues, rather than handicap the Legislative Committee by lack of funds.

Dr. C. H. Cronk, Bloomfield, stated that he had been instructed to inform the House of Delegates that if the dues were raised, his Society (Davis County) would drop out.

Dr. E. B. Winnett, Des Moines, reminded the House that the same situation had previously arisen in the Polk County Society; that everyone had said that if the dues were raised, there would be no Polk County Society. The dues were raised; the Society lost three members; and is now doing better than ever before. Dr. Winnett said that there was as much danger of losing members by keeping the Society on a mediocre level, as by raising the dues.

Dr. Albert P. Johnson, Sigourney, told the House that he had taken the precaution to find out the attitude of the Keokuk County Society, and each individual member had stated that he did not care what the amount of the dues would be, if they got results.

Dr. Emil C. Junger, Soldier, Monona County, confirmed Dr. Johnson's opinion that the State Society members would be willing to pay for value received.

Dr. E. B. Williams, Montezuma, described the method of paying dues in the Powesheik County Medical Society, from funds received through the contract with the county supervisors for the care of the indigent sick, and recommended that this method be used by other societies.

Dr. John W. Wailes, Davis City, said they had lost two members from the Decatur County Society because of a raise in dues, but that a man is of no value to his Society unless he is willing to support it.

Dr. E. B. Bush, Ames, Story County, signified his approval of raising the dues, stating that any forward-going organization must at times spend some money on purchasing equipment; that the necessity for raising the dues was, metaphorically speaking, the purchase of equipment. Dr. Bush expressed his disapproval, however, of raising the dues for only one year.

Dr. Winnett asked the Chairman to say a few words on the subject.

Dr. Rohlf pointed out that the dues of the Iowa State Medical Society were less than those of any surrounding states; and that the state veterinarians' dues were higher than those of the Medical Society. He cited the instance of the Minnesota Society, the membership of which had increased after the raise in dues, and said that Minnesota had one of the best medical practice acts of any state. He stated that the State Society was engaged in activities that it had never entered before, some of which were caused by lack of activity during the past several years.

Dr. Rohlf then asked for a standing vote on the motion as amended by Dr. Jepson. The ayes being 27, the nays 19, the motion carried.

The Chairman then asked Dr. Hearst to present the report of the Committee on Indigent Physicians:

So far we have heard from about fifty counties. Three men have been reported as in need of help. We should like to have reports from other counties.

We have met and decided that we should try the plan of the dentists, as explained in my previous report. My understanding is that this plan has worked out satisfactorily.

I understand that there has been and will con-

tinue to be some discussion in the House of Delegates of the American Medical Association in regard to this problem. I would like to ask that our delegates take up the matter and if there is any better plan suggested, that they report it back to us. Until such time, the committee recommends that the plan of sending seals to members be instituted.

Dr. Hearst moved that the plan suggested be adopted. Motion seconded and unanimously carried.

The Secretary then reported that he had four requests from four County Medical Societies, asking the House of Delegates to make the following men life members of the State Society:

Dr. Charles F. Quinn, Cherokee.
Dr. John C. Wright, Clear Lake.
Dr. Theodor T. Blaise, Mason City.
Dr. Oscar W. Lowry, Des Moines.

Dr. Parker moved that these four members be made life members of the Iowa State Medical Society. Motion seconded and carried.

Dr. Parker then stated that he thought the House owed the Iowa State Pharmaceutical Association a resolution or a vote of endorsement to the suggestions made by the representative from that organization at the first meeting. He also suggested that the Chairman appoint a committee from the Iowa State Medical Society to represent the Society in the deliberations of the Pharmaceutical Association. Dr. Parker requested that he be made chairman of that committee because of his seventeen years' experience in the teaching of pharmacology and his large acquaintance in that profession. He mentioned the important field of accomplishment which lay in the cooperation of the two professions, and the value of such cooperation in a legislative program. Dr. Parker moved that the House of Delegates endorse the suggestions made by the representative of the Iowa State Pharmaceutical Association and that the President of the Iowa State Medical Society appoint a special committee of three, with the Secretary as Chairman of that committee, to cooperate and work with a similar committee appointed by the Iowa State Pharmaceutical Association. Motion seconded and carried.

The Chairman suggested that the Councilors go into session immediately after adjournment.

Dr. E. B. Williams, Montezuma, requested that at least two pages of the JOURNAL OF THE IOWA STATE MEDICAL SOCIETY, be given to any member of the Society upon which he might express his opinions, and that such pages be known as the Open Forum.

Dr. M. J. Kenefick, Algona, stated that if the JOURNAL were to represent the profession of Iowa, it should be open to the opinions of the profession.

The Chairman asked if it be the idea of the House that material submitted to the Open Forum should be published without the censorship of the Committee on Publication.

Dr. Parker explained that the Committee on Publication consists of the Editor, the Trustees and the Secretary of the State Society. He suggested that Dr. Williams simply make a motion that an Open Forum page be established in the JOURNAL.

Dr. Williams moved that it be the opinion of the House of Delegates of the Iowa State Medical Society that an Open Forum of not more than two pages should be established in the JOURNAL OF THE IOWA STATE MEDICAL SOCIETY.

Motion seconded and carried.

Dr. Parker informed the House of the requests of various cities to be the host of the American Medical Association in 1932; New Orleans, Memphis, etc., and suggested that that matter should be left to the delegates to the American Medical Association.

Dr. C. S. Kennedy, Logan, remarked that the medical profession should cooperate with the dentists and veterinarians, as well as with the pharmacists, since the professions have many problems in common.

He also suggested that the doctors' wives be organized to support the legislative program of the State Medical Society.

Dr. Rohlf asked Mr. Judisch to take a few minutes' time.

Mr. Judisch stated that his idea was to coordinate all forces that stood for legitimate medicine, and that he had taken it upon himself to speak to the veterinarians and to the dentists.

The Chairman expressed his appreciation of the courtesy and cooperation and wonderful spirit manifest in the 1931 session of the House of Delegates.

Upon motion seconded and carried the meeting adjourned at 10:45 a. m., sine die.

Respectfully submitted,
Robt. L. Parker, M.D., Secretary.

INCREASE IN SUICIDE RATE IN NEW YORK STATE

In a recent issue of *Health News*, a booklet issued by the New York State Department of Health, suicides within the state reached their high point in 1930 when 2,345 were recorded. The suicide rate of 18.6 per 100,000 population was 22 per cent above the average for the preceding five years. Compared with 1929, the number of suicides showed an increase in the entire state of 210 and in New York City of 148. It is stated that the increase in suicides in the state occurred mainly among men, the number rising from 1,563 in 1929 to 1,760 in 1930. In the period from 1920 to 1930 the number of suicides doubled from 1,189 to 2,345, while the population of the state increased only 21 per cent. Suicides among men during this period rose from 853 to 1,760, an increase of 106 per cent; suicides among women rose from 336 to 585, or 74 per cent.

NEW AND NON-OFFICIAL REMEDIES

Cutter Laboratory
Oak Pollen Extract-Cutter; Western Ragweed Pollen Extract-Cutter; Western Water Hemp Pollen Extract-Cutter

Gane & Ingram, Inc.
Ephedrine Hydrochloride
Ephedrine Sulphate

SPEAKERS BUREAU ACTIVITIES

PROFESSIONAL ADVANCEMENT

Again this year the Speakers Bureau, in cooperation with the College of Medicine of the State University of Iowa, is able to offer to the physicians of Iowa an opportunity for advanced study—a chance to review certain fundamentals in medicine or to learn of recent developments in certain fields. A similar proposition was made last year by the Bureau and nearly 200 Iowa doctors took advantage of it. The venture at that time was more or less experimental, as we were blazing new trails, where few precedents had been set. The commendation and approval of these courses apparently indicate that the project was a success. No sooner were the courses completed, than demands were made for additional ones.

This year the Bureau has definite data to guide its planning of the post-graduate work. Questionnaires were sent to those who took the previous courses and the information and suggestions contained in the 130 replies have been very valuable, and followed wherever possible.

The same general schedule is to be followed. The work is to consist of two courses, extending over a period of 10 weeks—two hours for each course, one day a week. This makes a total of four hours' work a week. The lectures will come at 5:00 to 7:00 and 8:00 to 10:00 on the same day of each week. The courses will be conducted as symposial courses—the heads of the appropriate departments in the Medical College giving the various lectures. The questionnaires indicated a great interest in the subjects of surgery for the general practitioner, and pediatrics. Therefore such a course in surgery is to be offered this fall, accompanied, it is hoped, by a course in pediatrics.

In order that more work may be offered this year, the first courses to be offered will begin early in September, so that they may be completed before bad weather sets in. This will eliminate the possibility of inclement weather and attendant road conditions preventing doctors from driving from nearby towns to attend these courses.

It is impossible, of course, to offer these courses in every locality where the physicians wish to take this road to professional advancement. For the fall courses, a limit of four centers may receive this privilege. Any group of closely situated physicians which can provide a membership of 35 or 40 for these courses should immediately write the Bureau requesting that their county or community be one of these four centers. Interested members should immediately request their county secretary to make arrangements or write the Bureau for further information. Do not wait until the next meeting of your county society—you may then be too late. In this case, indeed, does the ancient proverb hold true: "The early bird catches the worm."

JUNE PLACEMENTS

The heat of the summer months, and vacations have limited the number of requests for speakers for lay audiences. During June, only two lay organizations were served through the Bureau. The 4H Club of Chickasaw County had a Rally Day program on June 30, and the health talk of the day was given by Dr. Eugene Smith of Waterloo. This same organization had its state meeting this month at Ames, when Dr. D. J. Glomset of Des Moines spoke to them on the subject of "Dignifying the Health Program."

The Bureau was called upon to help several county societies with programs. Dr. B. F. Wolverton of Cedar Rapids spoke to the Poweshiek County Medical Society at its meeting on June 2. The team composed of Dr. C. S. Cornell, Dr. F. M. Roberts and Mr. William Koeneman, of Knoxville, presented their symposium on Medical Economics to the Cass County Medical Society. To the annual meeting of the Jackson County Medical Society at Bellevue, the Bureau sent Drs. R. B. Gibson and J. P. Clarke of Iowa City, who presented papers on "Medical Care and Control of Diabetes," and "Surgical Complications of Diabetes," respectively. The Marion County Medical Society requested the symposium on "Psychoneurosis," which was presented by Drs. F. A. Ely, H. B. Henry and Russell C. Doolittle of Des Moines. The Appanoose County Medical Society heard Dr. F. B. Dorsey of Keokuk present a paper on "Retrodisplacement of the Uterus," and Dr. William Rankin of Keokuk on "Prenatal Care and So-Called Normal Delivery."

Other county society programs arranged by the Bureau were those in connection with the chest clinics which were sponsored for the Buchanan County, Adair County and Union County Medical Societies. Drs. John H. Peck, Daniel J. Glomset and C. B. Luginbuhl conducted the clinics and were assisted by Drs. W. L. Bierring and Lee Forrest Hill in presenting scientific programs on diseases of the heart and lungs. In connection with the clinics at Creston, the entire membership of the new Tenth Councilor District was invited. At the dinner, President Elect B. L. Eiker, President Channing G. Smith, Secretary Robert L. Parker, Managing Director Vernon D. Blank and Dr. D. J. Glomset, Chairman of the Speakers Bureau Committee, spoke on phases of state society activities. Councilor J. G. Macrae spoke on the formation of a new Tenth District Society.

Dr. E. M. Meyers of Boone spoke to the nurses of Cass County at their graduating exercises at Atlantic on June 9.

We feel that these meetings, to which a total of 28 speakers was sent, represent a considerable amount of activity for lazy summer months.

SOCIETY PROCEEDINGS

Boone-Story Society

About twenty-five members of the Boone-Story Medical Society met at the Ledges State Park, Tuesday, June 16, for the annual picnic. A number enjoyed swimming in the pool of Camp Hantesa, after which a beefsteak dinner was served to those present.

Bremer and Butler Counties Have Joint Meeting

A joint meeting of the Bremer and Butler County Medical Societies was held at Waverly, Thursday, May 28. Following a six-thirty dinner at the Community Cafe, members of the two societies adjourned to St. Joseph's Mercy Hospital for the business session. Dr. L. C. Kern, delegate from the Bremer County Society, reported on some of the actions taken at the Annual Session, and Dr. Bruce Ensley, delegate from the Butler County Society, discussed the points which Dr. Kern had purposely omitted. Drs. Kern and Rohlf were appointed by the president of the Bremer County Society to make a report on the fee bill.

F. R. Sparks, M.D., Secy.

Cass County

Three Knoxville men furnished the program for the Cass County Medical Society, at its meeting Thursday, June 18, in Atlantic. The topic of the evening was "Medical Economics," and F. M. Roberts, M.D., spoke on Cults, and How to Combat Them; C. S. Cornell, M.D., explained the Marion County Contract for Care of the Indigent Sick; and Mr. William Koeneman, editor of the Knoxville *Journal*, talked on Advertising by Physicians.

Cerro Gordo County

The Cerro Gordo County Medical Society held its regular meeting at the Clear Lake Country Club, Tuesday, June 16. Wives and friends of the physicians were guests of the County Medical Society at a seven o'clock dinner, and the program following, which consisted of an address by Dr. H. M. Gage, president of Coe College.

T. E. Davidson, M.D., Secy.

Henry County

Friday, June 19, members of the Henry County Medical Society held a picnic and meeting at the New London Country Club. Physicians and guests attending spent the afternoon in fishing, golf, and swimming. A six-thirty dinner was served, and a scientific program then presented as follows: Treatment of Pneumonia, E. W. Harrison, M.D., of Winfield; The Trend of Medical Practice Today, G. M. Van Ausdall, M.D., of New London; and Obstetric Complications, W. S. Lessenger, M.D., of Mt. Pleasant.

Jackson County

The members of the Jackson County Medical Society were hosts to members from Clinton, Dubuque and Jones county medical societies, Thursday, June 18, when they met in Bellevue State Park for their annual Mississippi River catfish dinner. The dinner was held at noon, preceded by a morning of golf and sight-seeing, and the following scientific program was presented at two o'clock: Malnutrition in Childhood from a Dental Standpoint, C. L. Veach, D.D.S., of Bellevue; Fundamentals in Surgical Treatment of Pulmonary Tuberculosis, J. Carl Painter, M.D., of Dubuque, superintendent of Sunnycrest Sanatorium; and a Symposium on Diabetes, with R. B. Gibson, M.D., of the State University of Iowa, speaking on Medical Care and Control, and J. P. Clark, also of the State University of Iowa, talking on Surgical Complications.

Johnson County

Alfred W. Adson, M.D., brain surgeon at the Mayo Clinic, Rochester, delivered the address of the evening, at the June 3 meeting of the Johnson County Medical Society, held in the American Legion Building. Dr. Adson spoke on The Indications for Sympathectomy.

Madison County

The Madison County Medical Society met Monday, June 8, at the Winterset Hospital, for a dinner meeting. The scientific program consisted of papers by two Des Moines physicians as follows: Fractures, Verl A. Ruth, M.D., and Gastric and Duodenal Ulcers, J. T. Strawn, M.D.

Marion County Meetings

The members of the Marion County Medical Society together with those of Lucas and Mahaska Counties were guests of the United States Veterans' Hospital Medical Society, at the United States Veterans' Hospital No. 57, in Knoxville, the afternoon of May 28, at which time the following program was presented: Address of Welcome, M. L. Underwood, M.D., medical officer in charge; The Pathology, Diagnosis and Treatment of Bronchiectasis, with Case Reports, M. H. Goldman, M.D.; Clinical Neurology with Presentation of Cases, Charles M. Schiek, M.D.; The Diagnosis of Early Pulmonary Tuberculosis, William W. Bourke, M.D.; Considerations Concerning Electrocardiograms, Donald M. Williams, M.D.; and The Relation of Body Habitus and Psychotic Types, Harold N. King, M.D. After the program, supper was served at the nurses' home. A few impromptu talks brought to a conclusion a very profitable and enjoyable afternoon.

The Speakers Bureau of the Iowa State Medical

Society furnished the program for the regular June meeting of the Marion County Medical Society which was held in Pella, Tuesday, June 23. Following a six-thirty dinner, a Symposium on Psychoneurosis was presented by Frank A. Ely, M.D., H. B. Henry, M.D., and Russell C. Doolittle, M.D., all of Des Moines. Dr. E. C. McClure of Bussey, delegate from Marion county, gave a detailed report of the actions taken in the House of Delegates during the last annual session.

C. S. Cornell, M.D., Secy.

Mills County

The Mills County Medical Society met in Glenwood, Monday, June 15, and the following program was presented at that time: Delegate's Report, J. G. McCue, M.D., of Silver City, discussion by George Mogridge, M.D., of Glenwood; Delayed Resolution in Pneumonia, Edgar Christy, M.D., of Hastings, discussion illustrated with X-ray plates, by I. U. Parsons, M.D., of Malvern, by T. B. Lacey, M.D., of Glenwood, on X-ray diagnosis, and methods of treatment, and by George Mogridge, M.D., of Glenwood, on differential diagnosis of pulmonary conditions; and Medical Care of the Indigent Sick in the County, by George M. Agan, M.D., of Glenwood. Members of the society and their wives were guests of Dr. Mogridge at a noon luncheon.

James M. Donelan, M.D., Secy.

Monroe County

Thursday, June 11, the Monroe County Medical Society held its regular meeting in Dr. T. R. Castles' office in Albia. J. F. Stafford, M.D., of Lovilia, presented a summary of the State University Extension Courses held at Oskaloosa during the past year, and Samuel T. Gray, M.D., of Albia, reported on the annual meeting of the Iowa State Medical Society.

T. A. Moran, M.D., Secy.

Palo Alto County

The entire membership of the Palo Alto County Medical Society assembled Thursday, June 4, at the Kermoore Hotel in Emmetsburg, for a dinner meeting. The members of the society believe that this is the first time a 100 per cent membership has ever been attained. Following the dinner and business session, E. R. Coffey, M.D., of the State Department of Iowa, addressed the group on The County Health Unit.

Harold L. Brereton, M.D., Secy.

Polk County

The June meeting of the society was sponsored by the Section on Experimental Medicine, and was held Tuesday, June 30. Arthur E. Hertzler, M.D., of Halstead, Kansas, renowned for his original thinking and writing, was the speaker. His lecture was on the subject of Recent Studies in the Pathology of the Genito-Urinary System. Descriptive photographs were projected on the screen to illustrate the types of cases discussed. The fifty-odd doctors who attended the meeting were well repaid for the short time they withstood the moderate warmth of the hall. Iced lemonade was served to all whenever desired. The next regular meeting will be held in September.

L. K. Meredith, M.D., Secretary.

Poweshiek County

Benjamin F. Wolverton, M.D., of Cedar Rapids, furnished the scientific program for the Poweshiek County Medical Society when it met Tuesday, June 2, in Montezuma. Dr. Wolverton's address was on Cardiac Arrythmia. Dr. E. B. Williams of Montezuma, delegate to the annual session of the Iowa State Medical Society, reported on some of the actions taken by the House of Delegates.

Tama County

Tama county dentists, veterinarians, and nurses were guests of the Tama County Medical Society at the regular June meeting of that organization. Dr. William L. Hearst of Cedar Falls, councilor of the newly formed Sixth District was present and concluded the program with a plea for the formation of a district society to meet at least once a year. Two other addresses were on the program, Indications of Tuberculosis in the Herd, R. C. Byrnes, D.V.M., of Tama, and The Injection Treatment of Internal Hemorrhoids, M. L. Allen, M.D., of Tama.

Washington County

Tuesday, June 2, Peter A. Bendixen, M.D., of Davenport, addressed the Washington County Medical Society on Fractures of the Lower Extremity. Dr. Bendixen illustrated his lecture with lantern slides.

Des Moines Valley Medical Association

The fifty-eighth annual meeting of the Des Moines Valley Medical Association was held in Ottumwa, Tuesday, June 2. The morning session was held at the Ottumwa Hospital, with John B. Potts, M.D., of Omaha, Nebraska, addressing the group on Modern Conception of Focal Infections Secondary to Paranasal Sinuses and Methods of Diagnosis. A second lecture, Obscure Abdominal Pain: The Importance of Careful Urinary Tract Investigation, was presented by J. Hoy Sanford, M.D., of St. Louis. Following the twelve-thirty luncheon served at the Ottumwa Country Club for the attending physicians and their wives, the afternoon session convened at the St. Joseph Hospital. H. Dabney Kerr, M.D., of Iowa City, spoke on Roentgen Diagnosis of Hip Conditions; Newell C. Gilbert, M.D., of Chicago, talked on Auricular Fibrillation; and Geza de Takats, M.D., also of Chicago, delivered an address on Peripheral Vascular Diseases.

The results of the election of officers are as follows: Dr. W. W. Stirlen of Delta, president; Dr. Ira N. Crow of Fairfield, first vice president; Dr. J. C. Kepler of Kirksville, Missouri, second vice president; and Dr. E. B. Hoeven of Ottumwa, was re-elected secretary and treasurer.

Twin Lakes District Medical Society

The Ninth Annual Assembly of the Twin Lakes District Medical Society was held Thursday, June 18, at Rockwell City. The counties comprising this society are Calhoun, Carroll, Greene, Hamilton, Humboldt, Ida, Kossuth, Pocahontas, Sac, Webster and Wright. The meeting was called to order by President M. J. Kenefick at 9:00 A. M., and Frank C. Neff, M.D., professor and head of the department of pediatrics, University of Kansas College of Medicine, presented a Pediatric Clinic. Walter L. Bierring, M.D., of Des Moines, then spoke on Medical Practice in Perspective, and Clifford J. Barborka, M.D., of the Mayo Clinic, Rochester, concluded the morning session with a Medical Clinic, presenting cases of Epilepsy, Migraine, and Obesity. After the noon picnic luncheon, Channing G. Smith, M.D., of Granger, and president of the State Society, opened the afternoon program with a paper on The Increase in Our Dues. Following this, there were informal greetings from ex-presidents of the Iowa State Medical Society who were in attendance. The Honorable L. J. Dickinson, United States Senator from Iowa, was present, and delivered an address on Medical Science as Applied to Law Enforcement, after which William F. Braasch, M.D., of the Mayo Clinic, Rochester, conducted an Urologic Clinic, with the general subject of Various Types of Infection in the Genito-Urinary Tract as Met in General Practice. Palmer Findley, M.D., of Omaha, Nebraska, gave a detailed report of the White House Conference on Child Welfare and Protections, and Golder Lewis McWhorter, M.D., Associate Professor of Clinical Surgery, Rush Medical College, closed the scientific program with a Surgical Clinic, illustrated with lantern slides.

At the business meeting Dr. J. L. Peppers of Webster City, was elected president for the coming year, and Dr. Paul VanMetre of Rockwell City, was re-elected secretary and treasurer.

As a souvenir of the occasion, each person attending was presented with a directory of approximately 1,000 native sons of Iowa who are now practicing medicine outside of the state of Iowa.

Waterloo Medical Society

Dr. W. H. Bickley was elected president of the Waterloo Medical Society at the annual business meeting held Tuesday, June 16. Other officers are: Dr. George C. Murphy, vice president; Dr. E. W. Thielen, secretary, and Dr. J. L. Kestel, treasurer.

NEW TENTH DISTRICT SOCIETY ORGANIZED

At the conclusion of an all-day scientific session which attracted attendance from every part of the tenth district to Creston on Friday, June 26, it was unanimously voted to organize the Tenth District Medical Society.

The day's session was opened with a heart and lung clinic under the joint auspices of the Speakers Bureau of the Iowa State Medical Society and the Iowa Tuberculosis Association and the Iowa Heart Association, Drs. C. B. Luginbuhl and John H. Peck being the clinicians. Following a banquet at the Iowana Hotel, during which President Channing G. Smith and Secretary Robert L. Parker spoke upon State Society Activities, two scientific papers were presented: Childhood Type of Tuberculosis, Lee Forrest Hill, M.D., and Coronary Arteries in Health and Disease, Walter L. Bierring, M.D., both of Des Moines.

Dr. Frank E. Sampson, Creston, made the proposal for the district society in a strong address which set forth the advantages of a closer union of professional men upon a wider basis than the county medical society, especially where the membership is somewhat scattered as in southern Iowa. Dr. Sampson, who had taken the lead in the formation of the Southwest District Society, indicated that the new organization should replace the former society. Dr. Sells of Osceola urged that the name and traditions of the Southwest Society be preserved in the new society. By unanimous vote of those present, Dr. Macrae, Councilor of the Tenth District, was elected chairman of the organization committee and was empowered to select a secretary and call a second meeting for completing the organization. President Elect Eiker of Leon presided at the evening session and complimented those present upon having created the first Councilor District Society in the state of Iowa.

AUXILIARY NEWS

Mills County

Monday, June 15, the wives of the physicians in Mills county organized a Ladies Auxiliary to the Mills County Medical Society. Officers of the new auxiliary are: Mrs. J. M. Donelan of Glenwood, president; Mrs. I. U. Parsons of Malvern, vice president; Mrs. J. G. McCue of Silver City, secretary, and Mrs. Edgar Christy of Hastings, treasurer.

Polk County

Mrs. H. A. Minassian has been named to head the Polk County Auxiliary for the next year. Other officers elected at the annual meeting held recently at the home of Mrs. Oliver J. Fay are: Mrs. Thomas A. Burcham, vice president; Mrs. A. C. Page, secretary, and Mrs. R. R. Simmons, treasurer.

INTERESTING NEWS

In Brief

During the recent meeting of the American Medical Association an announcement of policy was made indicating that the association through its various research organizations would continue and extend its plan for the endorsement of food products, since it was generally believed that this service was a positive contribution towards the advancement of public health.

A group of four hundred New York physicians have recently organized a medical guild with the thought

of furnishing medical care at a flat rate of $1.00 per week. It is announced that the group will work as a medical clinic and will advertise in newspapers and magazines, limiting, however, their advertising to copy which is acceptable under the present code of medical ethics.

Catholic physicians' guilds have been organized throughout North America with the express purpose of promoting fraternity among Catholic physicians and for furthering the teachings and dictates of the Catholic Church in medical practice. The organization will oppose birth control, therapeutic abortions and the sterilization of criminals.

Harry M. Hoxsey, formerly of Muscatine, Iowa, and more recently director of the Detroit cancer clinic, was recently sentenced to six months in the Detroit House of Correction. He has been twice convicted in Illinois for violation of the medical license laws, but announces that the present sentence will be appealed.

Announcement has been made of two new tuberculosis clinics in Council Bluffs. One clinic will be in charge of Dr. W. J. Stech, at the Mercy Hospital and Dr. Raymond Rice will have charge of a second at the Jennie Edmundson Hospital.

At a recent meeting of the National Catholic Hospital Association in St. Paul, it was urged that every means be employed to reduce the high cost of illness. The suggestions offered included a reduction in medical fees and a reduction in hospital charges.

To assist in the elimination of typhoid fever in Iowa, the State Department of Health has recently announced that they will furnish free of cost typhoid vaccine to all campers, Boy and Girl Scout organizations, Camp Fire Girls and 4-H Clubs upon application.

Announcement of $500.00 in prizes to be awarded at the Iowa State Fair to healthy babies has been made and the rules governing the contest established. Entry blanks may be secured from the secretary of the Iowa State Fair at Des Moines.

Dr. Edward Henry Cary of Dallas, Texas, was chosen president-elect of the American Medical Association at the recent meeting of that organization in Philadelphia. Dr. Cary is the emeritus dean of Baylor University College of Medicine.

The American Society for the Control of Cancer has recently announced that they favor the establishment of special cancer institutes, hospitals, and clinics as the most practical method of reducing deaths from cancer.

The Washington County Health Board has selected Dr. Hershel L. Hendricks of Minneapolis, Kansas, as director of their health unit for the ensuing year.

Dr. James H. Hutton, retiring president of the Chicago Medical Society, urged the investigation of ethical advertising for physicians as a means of combating quackery and fraud in health matters.

At the recent commencement exercises in Iowa City, the University of Iowa awarded ninety diplomas in medicine. This number included those granted in July and August of 1930 and February of 1931.

PERSONAL MENTION

Dr. Melvin G. Bourne plans to open an office in Algona early in July. Dr. Bourne was graduated from the College of Medicine, State University of Iowa, took a summer course in obstetrics at the Lying-In Hospital in Chicago, and served a year of interneship at the Harper Hospital in Detroit.

Dr. Ernest E. Shaw, of Indianola, left the first week in June for an extended European visit, during which time he will attend the Annual Convention of Rotary International at Vienna. Dr. Shaw is acting as delegate for the Indianola, Valley Junction, Nevada, Chariton, Albia, Leon, and Storm Lake Rotary Clubs at the convention. Following the convention he will take a six weeks' post graduate course at the Vienna Clinics, and plans to return the first of August.

Dr. C. L. Bain, formerly of Corning, has moved to Holstein, where he has associated himself in practice with Dr. C. G. Bretthauer. Dr. Bain will specialize in obstetrics and gynecology.

Dr. Granville N. Ryan, of Des Moines, addressed the Colfax Parent-Teachers Association, Thursday, May 21, taking as his subject, "Preventive Medicine."

Dr. and Mrs. John S. Tracy are leaving Storm Lake, and going to Sioux City, where Dr. Tracy is to be associated in practice with Dr. William Cremin. Dr. James O'Neil, a recent graduate of Creighton University School of Medicine will take the place of Dr. Tracy in Storm Lake.

Dr. W. R. VanDuzer, of Casey has just returned from Philadelphia, where he took a two weeks' post graduate course at the Jefferson Medical College from which he was graduated in 1912.

Dr. E. T. Plowman, who was graduated from the State University of Iowa College of Medicine in 1930, has located in Mt. Pleasant. Immediately upon completing his interneship at the Mercy Hospital in Des Moines, Dr. and Mrs. Plowman moved to Mt. Pleasant.

Dr. G. Raymond Johnson, who has been practicing medicine in Des Moines, since his graduation from the State University of Iowa College of Medicine, in 1925, has left that city, and moved to Ottumwa, where he expects to locate permanently.

Dr. Hillard Tolliver, graduate of the State University of Iowa College of Medicine, who served one year's interneship at the University Hospital, and one year as clinical assistant there, has purchased the office equipment of Dr. W. L. Griffin at Charles City, and plans to arrive there about the first of July. Dr. Griffin expects to leave Charles City about that time for his new location in Los Angeles, California.

Dr. M. L. McCreedy, now in Wichita, Kansas, has made arrangements to locate in Brighton. He was graduated last year from the College of Medicine, State University of Iowa, and is now completing his interneship at the Wesleyan Hospital, in Wichita.

Dr. Kenneth H. Weaver, now of Williams, is returning to his home town of Ellsworth to locate in the practice of medicine. Dr. Weaver was graduated three years ago from the State University of Iowa College of Medicine, and since that time has served a year's interneship at the Iowa Methodist Hospital in Des Moines, and practiced two years at Williams.

Dr. Lyle W. Koontz, who received his degree from the State University of Iowa College of Medicine in 1929, and has served two years as an interne at the University Hospital, will succeed Dr. C. H. DeVaul, as partner of Dr. C. C. Griffin in the practice of medicine in Vinton.

Dr. George Maresh was elected president of the Iowa City Lions Club for the first half of the ensuing year at a meeting held Wednesday, June 10, at the Hotel Jefferson.

Dr. Charles C. Huntley, formerly of St. Louis, has established an office in Avoca, for the practice of medicine and surgery.

Dr. John N. Kenefick has left Winterset where he has practiced medicine for the past year, and is locating in Algona, where he will enter the office of his uncle, Dr. M. J. Kenefick.

Drs. G. Raymond Johnson and F. L. Nelson, both of Ottumwa, spoke respectively on "Dietetics," and "Pain," during the regular weekly health radio programs presented over Station WIAS, at Ottumwa.

CHANGES OF ADDRESS

Carl F. Jordan, from Iowa City to Burlington.

R. W. Peterson, from Kanawha to Minneapolis.

Julia F. Hill, from Baltimore, Maryland, to Des Moines.

Edmund M. Cowart, from Iowa City to Houston, Texas.

William A. Boice, from Washington to Chicago, Illinois.

John W. Thornton, from Waterloo to Lansing.

A. A. Rhonalt, from Waterloo to Spencer.

A. H. Lekwa, from Dows to Story City.

Hale F. Shirley, from St. Louis to Algona.

Norman F. Miller, from Iowa City to Ann Arbor, Michigan.

NEW PHYSICIANS LICENSED IN IOWA

Fred H. Beaumont, Council Bluffs, Iowa, by reciprocity with Illinois.

Frederick E. Hambrecht, Iowa City, Iowa, by examination.

Carl W. Aageson, Madison, Wisconsin, by examination.

Morris Feldman, Hoboken, New Jersey, by examination.

Delavan V. Holman, Mason City, Iowa, by examination.

Hillard A. Tolliver, Charles City, Iowa, by examination.

Amos G. Rees, Waterloo, Iowa, by reciprocity with Pennsylvania.

Roy Wm. Tandy, Tracy, Iowa, by reciprocity with Missouri.

MARRIAGES

Miss Lucille Jerald of Waterloo, and Dr. J. Rudolph Schenken of Iowa City, were united in marriage at the home of the bride's brother, Mr. Stanley Jerald at Waterloo, Wednesday, May 27. Immediately after the ceremony and reception, Dr. and Mrs. Schenken left on a month's motor trip through the east. They will be at home in Iowa City after July first, where Dr. Schenken is inspector for the department of pathology at the university.

Another Iowa City marriage of interest is that of Miss Edna Stockig of Boone, and Dr. John J. Clemmer, Jr., of Cresco, which took place Wednesday, June 3, at the Lutheran Church in Boone. The young couple left immediately for an extended motor trip to New York and Niagara Falls, and other places of interest. They plan to make their home in Iowa City where Dr. Clemmer will be resident doctor in the department of pathology at the university hospital.

DEATH NOTICES

Druet, Arthur Lewis, of Larchwood, died May 28, at the age of fifty-four, in a Chicago hospital after an illness of many months. He was graduated in 1898 from Drake University College of Medicine and had long been a member of the Lyon County Medical Society.

Tillmont, Charles Peter, of Centerville, died May 29, at the age of sixty, as the result of a sudden heart attack. He was graduated in 1901 from the University of Illinois College of Medicine and had been a member of the Appanoose County Medical Society some time ago.

Williams, Robert R., of Manning, died June 7, at the age of eighty-two after an illness of two years. He was graduated in 1876 from the Rush Medical College and had long been a member of the Carroll County Medical Society.

HISTORY OF MEDICINE IN IOWA

Edited by the Historical Committee

DR. WILLIAM JEPSON, Sioux City
DR. ARTHUR D. WOODS, State Center
DR. FRANK M. FULLER, Keokuk
DR. WALTER L. BIERRING, Des Moines
DR. NORMAN F. MILLER, Iowa City

Medical History of Washington County

C. A. BOICE, M.D., Washington

(Continued from June)

WASHINGTON COUNTY MEDICAL SOCIETY

We are not informed as to the original organization of the Society, but at a meeting in Brighton, September 3, 1873, a new constitution and by-laws drafted by Drs. Schofield, Fraser and Rodman, was adopted, and the officers of the previous organization elected to hold over. Whether there was a Society before Schofield's advent, we do not know. It is doubtful if there was. At least for many years, during all his active life until 1892, he was the bell wether in the Society. At the meeting above mentioned Drs. Schofield, Prizer, Parsons, Robertson, Burroughs, J. J. Rousseau, Eckles, Cushman, Adair, Fraser were present.

At the meeting of September 3, 1874, Dr. J. D. Miles, of Crawfordsville, reported treating a compound fracture of the leg in a boy eight years old with an antiseptic (carbolic acid) instead of the usual old time methods. Dressings were not changed for twenty-eight days. The results were entirely satisfactory, a good clean leg. It was not until five years later (1879) that Sir Joseph Lister announced the same procedure in England and has ever since been heralded as the father of clean surgery.

The Society had a committee on prevailing diseases and epidemics. On September 1, 1875, this committee, through Dr. J. R. Burroughs, presented the following report, embracing about one-half of the county: Of miasmatic diseases there were reported 1,422 cases; of enteric diseases, 91 cases, with 35 deaths; of diathetic causes 133, with three deaths; of tubercular diseases, 97 cases and 14 deaths, of parasitic diseases, 94 cases; diseases of nervous system 164 cases and 15 deaths; of eyes and ears 57 cases. There were also noted 45 cases of disease of circulation, 312 of the lungs; 446 of the digestive organs; 486 of the urinary organs. Diseases of bones and joints accounted for twenty-three. Violent diseases and deaths 162. This report accounted for 3,685 illnesses with 86 deaths.

In 1876, Dr. Schofield reported on the major surgery of the past, strangulated hernia, 4; cancer of the breast, 6; trephining, 1; lithotomy, 1; amputations, 11.

The above is the type of surgery performed and about all that was accomplished but when necessity arose and the need was imperative, these early doctors could and did rise to the emergency. They may have lacked in equipment but they did not lack in ability and nerve. The discovery of anesthetics and antiseptics gave to surgery its great opportunity. But before that time when work had to be done it could be and was done. Notwithstanding the long rides, often on horseback, to attend meetings, the average attendance was as good then as it is now.

In this same report we read: "A persistent and strong malarial influence is to be met in about all the sicknesses yet occurring in this county." Sir Ronald Ross did not prove the part the mosquito bears in the transmission of malaria until 1898, although it had long been suspected. Laveran in 1880 had proved its bacterial origin.

The county society was going well. Quite frequently doctors from neighboring counties were in attendance and for that reason a wider society was deemed advisable, in order to stimulate organization in other counties and to draw the doctors closer together. On May 26, 1875, Drs. Wm. McClelland, A. B. McCandless, O. H. Prizer, J. D. Miles, Darius Schofield, H. Cushman, R. H. Brice, F. B. McWilliams, Daniel McFarland, J. J. Rousseau and W. E. Fraser met and considered the matter. Dr. Schofield was directed to issue a call to the physicians in the counties of Washington, Louisa, Jefferson, Johnson, Keokuk and Muscatine to meet in Washington, June 23, 1875. Pursuant to the call a meeting was held on the appointed date and the Eastern Iowa District Society was organized. A few years later the counties of Henry, Lee and Des Moines were added.

The second article of the constitution declared this to be a society "to promote investigation in medicine in all it's departments and general good fellowship among its members."

In 1876 the population of Washington County was practically the same as at present—20,000. There were about 43 doctors in the county, 33 of them eligible to be called physicians by education and attainments. The other ten were just doctors. Now less than half that number of doctors are in the county.

Home prepared medicines were just as common as the soap kettle and hoop skirts. Every home had its shelf of infusion of tansy, dogwood bark, wild cherry, pennyroyal, smartweed tea, etc., ad nausem.

Dr. Thomas Mealey, of Pleasant Plain, in 1875 informed the society that his obstetric practice had reached 3,000 cases. There must have been a stork rookery in the southwest part of our county on Skunk river.

Dr. J. G. Henderson, who was born in Pennsylvania in 1854, and was a graduate of Starling Medical College, Columbus, Ohio, 1879, located in Harper from 1879 to 1884. After practicing in Washington for a year (1885) Dr. Henderson went to West Chester, where he practiced until 1927, except for short periods at Wellman, Ottumwa, Muscatine and seven years at Sweetland.

Dr. E. J. Meachem came in 1883. Dr. John F. Kempker, a Catholic priest, was graduated from the College of Physicians and Surgeons, Keokuk, 1885, and lived for a time in this county at Riverside. He died in Davenport. Dr. M. C. Terry started practice in Brighton about 1878. Dr. W. P. Gardner, a graduate of the State University of Iowa Medical School in 1885, located in Wellman the same year, associating himself with Dr. J. W. Morgan.

The tenets of homeopathy were upheld by Dr. T. G. Roberts, who was graduated in 1877 from St. Louis Homeopathic Medical College; and Dr. S. N. McLain who was graduated from the Homeopathic Department of the State University of Iowa. Dr. McLain became interested in rapid fire guns, gave up his practice, and removed to Flint, Michigan, where he manufactured such guns for many years. He died there in 1930. Dr. Roberts moved to Chicago in 1896, where he died a few years later.

The law requiring physicians to register went into effect in 1886. A physician, without a diploma, who had been practicing five years prior to that date could so register and continue. There were a few who took advantage of this provision. Therefore the names of most of the men who practiced medicine in the county from 1840 to 1870 do not appear on the records. At least 150 doctors have registered and practiced in Washington County since 1840. Some few registered in their home county but never practiced here: Ludwig Simon, Mel Shields, Harvey McCall and Claude Terry.

A number of physicians located for practice but moved on before many months or years had passed, for various and unknown reasons. The majority made the county their home for a period of many years. Two at least, passed the half century mark, Dr. J. C. Boice, 57 years (1931) and Dr. Wm. McClelland, 56 years. Dr. McClelland had practiced six years in Pennsylvania before coming to Washington in 1846, making 62 years in all.

Soon after 1900, the Washington physicians felt the need of hospital facilities. Mrs. J. H. Laughead, a practical nurse, owned a home in the north part of town large enough to be used for hospital purposes. Arrangements were soon made whereby the physicians equipped an operating room, and Mrs. Laughead, and other nurses as needed, was employed to do the nursing. There was no salary list except when patients were in the hospital but it so happened that the hospital was never without patients during the five years it existed. This home was used as a hospital from 1907 to 1912. The institution trained not only the doctors but the laity as to the value of and an imperative need for a hospital, and when the Munger law was enacted in 1908 the foundation organization was ready to go ahead and success was assured. This small hospital had been a most valuable proving ground.

From Schofield's death in 1893 until 1900, very little surgery was attempted. An occasional amputation or a strangulated hernia had to be cared for.

The Washington County Hospital was a direct outgrowth of the activities and interest of the medical profession. In 1908 the Iowa legislature passed a bill permitting and authorizing counties to levy a tax to build and maintain hospitals. Immediate use of this law was made and at the general election in 1910, by a majority of 783, the erection of a hospital in Washington County was authorized. The hospital was opened July 16, 1912. More than 10,000 persons have since been cared for in it. This was the first hospital of its type; a number of Iowa counties have since erected such institutions, and the law has been copied in a dozen or more other states.

HEALTH UNIT

Another result of organized medicine was the Health Unit. With the cooperation of the Rockefeller Foundation, State Board of Health, Washington County and Washington City and School District, county wide health activities were carried out during 1924 and 1925. Dr. C. W. Stewart was the health officer. For certain political reasons the unit was discontinued.

The legislature of 1929 enacted a permissive county health unit law. Under this legal sanction the unit was reorganized and reactivated. The unit began operations April 1, 1930. Dr. Stewart was again chosen health officer. The money is raised by the Rockefeller Foundation and Washington County, City and School District. This was the first such unit in Iowa.

OSTEOPATHIC BILL DEFEATED IN DELAWARE

During the last session of the legislature in Delaware, Senator Simonton introduced a bill to create a special board of examiners for osteopaths, further granting them representatives on the State Medical Council. The bill passed the Senate with little opposition. When presented to the House it created considerable debate and the privilege of the floor was extended to a number of the leading osteopathic physicians including Arthur Patterson, D.O., Roger M. Gregory, D.O., and George F. Nason, D.O. The privilege of debate was also extended to W. O. LaMotte, M.D., president of the Delaware State Medical Society and other physicians prominent in state medicine. When the measure was finally brought to vote it was defeated 29 to 6.

THE JOURNAL BOOK SHELF

BOOKS RECEIVED

CANCER—Its Origin, Its Development and Its Self-Perpetuation —The Therapy of Operable and Inoperable Cancer in the Light of a Systemic Conception of Malignancy.—A Research by Willy Meyer, M.D.—Paul B. Hoeber, Inc., New York, 1931. —Price, $7.50.

*CLIO MEDICA—IV—INTERNAL MEDICINE—By Sir Humphry Rolleston, Bart.—V PHYSIOLOGY.—By John F. Fulton, M.D.—Edited by E. B. Krumbhaar, M.D.—Published by Paul B. Hoeber, Inc., New York, 1930.—Price, $1.50 for each volume.

*LEGAL MEDICINE AND TOXICOLOGY—By Ralph W. Webster, M.D., Ph.D.—Late Clinical Professor of Medicine (Medical Jurisprudence) in Rush Medical College, University of Chicago.—862 pages, illustrated.—W. B. Saunders Company, Philadelphia and London, 1930.—Price, cloth, $8.50.

*MEDICAL CLINICS OF NORTH AMERICA—Chicago Number —March, 1931.—Volume xiv, No. 5.—(Issued serially, one number every other month.)—255 pages with 21 illustrations. —W. B. Saunders Company, Philadelphia and London, 1931. —Price, Per Clinic Year, July, 1930, to May, 1931—Paper, $12.00; Cloth, $16.00.

*PRACTICAL DIETETICS IN HEALTH AND DISEASE—By Sanford Blum, A.B., M.S., M.D.—Fourth edition, revised and enlarged.—380 pages—F. A. Davis Company, Philadelphia, 1931.—Price, $4.00.

*PRINCIPLES AND PRACTICE OF PERIMETRY—By Luther C Peter, M.D., F.A.C.S., Professor of Ophthalmology, Graduate School of University of Pennsylvania.—Third edition, thoroughly revised.—315 pages, with 194 engravings and 5 colored plates.—Lea & Febiger, Philadelphia, 1931.—Price, $4.50.

*SYMPTOMS AND DISEASES APPLIED; Questionnaires; Differential Diagnosis; Mathematical Diagnosis.—By W. L. Kitchens, M.D., Texarkana.—Helms Printing Company, Texarkana.

*TEXTBOOK OF HUMAN EMBRYOLOGY—By Cleveland Sylvester Simkins, Ph. D., Associate Professor of Anatomy, University of Tennessee Medical School.—469 pages, with 263 illustrations, some in colors.—F. A. Davis Company, Philadelphia, 1931.—Price, $4.50.

*TRAUMATOTHERAPY—(Treatment of the Injured)—By John J. Moorhead, M.D., F.A.C.S., Professor of Surgery and Director, Department of Traumatic Surgery, New York Post-Graduate Medical School and Hospital.—574 pages with 625 illustrations.—W. B. Saunders Company, 1931, Philadelphia and London. Price, cloth, $7.00.

TREATMENT OF EPILEPSY—By Fritz B. Talbot, M.D., Clinical Professor of Pediatrics, Harvard University Medical School.—308 pages, illustrated.—The MacMillan Company, New York, 1930.—Price, $4.00.

USEFUL DRUGS—A List of Drugs Selected to Supply the Demand for a Less Extensive Materia Medica with a Brief Discussion of their Actions, Uses and Dosage.—Prepared under the Direction and Supervision of the Council on Pharmacy and Chemistry of the American Medical Association.—Edited by Robert A. Hatcher, Ph. M., Sc. D., M.D. and Cary Eggleston, M.D.—Eighth Edition.—Published by American Medical Association.

*WILLIAM HENRY WELCH AT EIGHTY—A Memorial Record of Celebrations Around the World in His Honor.—Edited by Victor O. Freeburg.—Published by the Milbank Memorial Fund, New York, 1930.

*_Review appears in this issue._

BOOK REVIEWS

CLIO MEDICA

A Series of Primers on the History of Medicine. IV—Internal Medicine by Sir Humphry Rolleston, Bart. V—Physiology by John F. Fulton, M.D. Published by Paul B. Hoeber, Inc., New York, 1930. Price, $1.50.

This series of primers, which presents a concise and readable history of medicine, has been designed upon lines unique in the fact that each booklet discusses a particular phase of medical history in its entirety and yet remains of pocket size.

Volume IV—The author of this volume is thought by many to be the most outstanding of the living authorities in the field of medical history and is eminently equipped for this presentation. Through a long lifetime of study and observation the author has been able to glean from the archives of medical history those outstanding and significant factors which have most indelibly affected modern medicine. In his fascinating literary style he has developed the history of internal medicine from the most ancient times through the period of Greek supremacy, the Renaissance, and finally the experimental period of the 19th Century to its present development as a medical art in our own era.

To perform such a task has required the greatest of skill and any physician will profit by a careful reading of this small volume. To those familiar with medical history this epitome is most refreshing. To the student the volume will prove an inspiration and an incentive to greater study.

Volume V—The author of this volume has successfully woven the story of the significant contributions to the sum total of modern physiology into an interesting story which stresses only the most outstanding of physiological research. Following a general discussion of the early developments in physiology, the author has followed three main themes: circulation, respiration, and digestion. In presenting the subject in this fashion he directs the student's attention not only to the main theme but to the various sidelights and contributing factors which have made these developments possible.

As may be expected such a presentation entails much of biography but at no point has he permitted the biographical viewpoint to overshadow his main theme—namely, the development of fundamental science. Incorporated in the text are seven well chosen illustrations and diagrams.

LEGAL MEDICINE AND TOXICOLOGY

By Ralph Webster, M.D., Ph.D., Late Clinical Professor of Medicine (Medical

Jurisprudence) in Rush Medical College, University of Chicago. 826 pages, illustrated. W. B. Saunders Company, Philadelphia and London, 1930. Price, cloth, $8.50.

It is very difficult to portray the true value of this volume by the expression of one opinion. In my perusal of the text I realized that it was extremely important from two standpoints. First, from a medico-legal point of view it is very valuable and should be in the library of every coroner and county attorney. It is equally valuable from a toxicologist's viewpoint in that the diagnosis and treatment of poisons as well as the laboratory tests for identification are thoroughly discussed.

In one volume of some 800 pages the entire subject of Legal Medicine and Toxicology is very well covered in a comprehensive and concise manner.

R. L. P.

MEDICAL CLINICS OF NORTH AMERICA

Chicago Number, March, 1931. (Issued serially, one number every other month.) Volume 14, Number 5. 255 pages with 21 illustrations. Per Clinic year, July, 1930, to May, 1931. Paper, $12.00; Cloth, $16.00. W. B. Saunders Company, Philadelphia and London, 1931.

This volume conforms to the established standard of this series in presenting timely discussion of medical problems from the standpoint of both diagnosis and treatment. The publishers correctly assume that the value of the work lies in a frank analysis of cases as they may be encountered in any practice, and not in discussions of rare diseases or unusual case histories.

Many conditions commonly seen in general practice are discussed in this volume, such as intestinal obstruction, cardiac insufficiency, fermentative colitis, the commoner skin conditions, rheumatic fever, pleurisy with effusion, chronic nephritis, etc. Of the more unusual conditions encountered in medical practice, attention is directed to the leukemias, purpuras in children, gonorrhea of the rectum, bacillus of pyocyaneus infection, and polyglandular hypofunction. The volume is adequately illustrated.

PRACTICAL DIETETICS IN HEALTH AND DISEASE

Sanford Blum, A.B., M.S., M.D. (4th Revised and enlarged edition). 380 pages, F. A. Davis Company, Philadelphia, 1931. Price, $4.00.

This text is now in its fourth edition. Conforming with the custom followed in the earlier editions, the authors have revised the entire text and introduced such new material as has been required to bring the subject matter entirely up to date. They have added a more complete discussion of the vitamins, and have entirely rewritten the section having to do with the alkaline foods in the treatment of acidosis. Believing that the physician who attempts to manage a case from the dietary standpoint cannot advise efficiently when such advice is given in generalities, the author has furnished a large number of suggested diets for use in various conditions indicating specifically the amounts and types of food allowed and the foods contra-indicated. These diets are classified under the disease condition in which they should be used and because of this diet classification are accessible without laborious search through the text.

Since it is a common experience that patients are prone to ignore dietaries and at best to liberally interpret dietary instructions, the authors rightly feel that the physician should make his instructions highly specific and entirely suited to the particular case. Such a course will certainly invite better cooperation upon the part of the patient. This volume is unreservedly recommended to any physician requiring assistance in practical dietetics.

THE PRINCIPLES AND PRACTICE OF PERIMETRY

By Luther C. Peter, A.M., M.D., Sc.D., F.A.C.S. Professor of Ophthalmology in the Graduate School of Medicine, University of Pennsylvania. Third edition, 315 pages, with 194 engravings and five colored plates. Cloth $4.50, net. Lea & Febiger, Philadelphia, 1931.

This splendid little volume of perimetry by Dr. Peter is concise, stimulating and informative. It presents in an interesting, readable form a subject which occupies a very important place in the practice of ophthalmology. The illustrations and colored plates are fine and the extensive bibliography is especially good. The publishers deserve commendation for the large, readable type. This work merits a large circulation among both students and practitioners.

R.R.S.

SYMPTOMS AND DISEASE APPLIED

Questionnaires, Differential Diagnosis and Mathematical Diagnosis—By W. L. Kitchens, M.D., Texarkana, Helms Printing Company, Texarkana.

This volume is entirely unique in our experience and approaches the problem of diagnosis from an angle heretofore untouched in medical publication. It is difficult, indeed, to satisfactorily review the volume because one lacks a yardstick by which to measure its possibilities. In general form it consists essentially of four parts, although each part refers directly to the material in the other sections.

In Part I the subjective symptoms are enumerated under the descriptive heads, for example: Under the heading of the "alimentary tract" will be found "Appetite increase," and appended under this heading are the conditions of diabetes mellitus, gastric dialation with pyloric stenosis, gastric hyperacidity, goiter exophthalmic, neuroses, pregnancy, and tape worm. Appearing before each of these titles is given a page number with reference to Part IV of the volume

where each of these conditions will appear as a page title. If we refer from the condition of diabetes mellitus to Part IV we find a list of thirty-two symptoms mentioned, such as insomnia, coma, drowsiness, loss of weight, dry mouth, slow respiration, etc.

According to the author's suggestion the physician would carefully question his patient relative to the chief complaints suffered. After having secured a list of the chief complaints he would refer to Part I of the volume and note the diseases which might present this symptom. Again by referring to Part IV he would review each disease condition, ascertaining from his patient the number of symptoms listed under each disease which might appear. Having persued this course exhaustively, the physician is then in a position to state the diagnosis and by reference to his store of knowledge or other texts, outline a course of treatment.

To the reviewer this method of diagnosis appears entirely mechanical and certainly in the average case, useless machinery. It is possible to conceive of a condition in which because of the obscurity of the diagnosis such an elaborate and exhaustive procedure might be of assistance. The volume represents a tremendous amount of labor upon the part of the author and the system in his hands has apparently been exceedingly helpful. The volume is privately printed and may be secured directly from the author.

TEXTBOOK OF HUMAN EMBRYOLOGY

By Cleveland Sylvester Simkins, Ph.D., Associate Professor of Anatomy, University of Tennessee Medical School. 469 pages, with 263 illustrations, some in colors. F. A. Davis Company, Philadelphia, 1931. Price, $4.50.

This volume has been presented primarily for the use of students. In its preparation the author has digressed somewhat from the usual form of presenting this subject insofar as the functional aspects are stressed rather than the morphological. Due to the recent researches regarding the physiology of reproduction, considerable material ordinarily not found in works of this sort has been included.

The volume contains twenty-nine chapters developing the subject from the fertilized germ cell through the various stages to the maturity of every body tissue and body function. The development of the various systems are treated in special chapters but the author correlates these various processes so that the student may appreciate the development of the organism as a whole.

The text is illustrated by 263 well chosen diagrams, drawings and photographs. At the close of the text is a well chosen bibliography. This bibliography is intended for advanced reading.

TRAUMATOTHERAPY

(Treatment of the Injured)—By John J. Moorhead, M.D., F.A.C.S., Professor of Surgery and Director, Dept. of Traumatic Surgery, New York Post-Graduate Medical School and Hospital—574 pages with 625 illustrations—W. B. Saunders Company, Philadelphia and London, 1931. Price, Cloth, $7.00.

This volume appearing under its rather unique title deals with the causation, symptoms and diagnosis of most traumatic conditions and stresses the use of various diagnostic aids. In each instance the condition is discussed thoroughly from the standpoint of treatment and the therapeutic agents or procedures definitely indicated. In many instances, treatment is presented in outline form so that the steps may be followed in appropriate order. As might be expected in a work of this sort, dislocations and fractures constitute the bulk of the book. Less attention is given to the treatment of traumatic wounds, traumatic neuroses, anesthesia and first aid methods. A valuable chapter is entitled, "Medico-legal and Allied Aspects."

In the teaching of traumatic surgery too much stress cannot be placed on the use of accurate illustrative drawings and photographs. In this work the author has used 625 illustrations. These illustrations and drawings have been prepared especially for this volume and for the most part have not appeared elsewhere. No general surgeon, industrial surgeon, or general practitioner should be without this volume.

WILLIAM HENRY WELCH AT EIGHTY

A Memorial Record of Celebrations Around the World in His Honor. Edited by Victor O. Freeburg. Published by the Milbank Memorial Fund, New York, 1930.

In celebration of his eightieth birthday which occurred on April 8, 1930, and in recognition of his enviable position as Dean of American Medicine, medical circles throughout the world paid tribute to Dr. William Henry Welch in memorial services in many centers. These celebrations have previously been reported in the JOURNAL. The committee having the arrangements for these celebrations in hand have collected the many addresses and testimonials in the form of letters and telegrams and proceedings of the various meetings and compiled them in book form.

Among the accounts of this international celebration will be found the ceremony in Washington, D. C., the address of President Hoover, the greetings from the League of Nations, the Ministry of Health of Great Britain and the Government Health Service of Germany. The text of the memorials presented to Dr. Welch at the dinner of the New York Academy of Medicine, the reception by the University Club in Baltimore, the meeting of the School of Medicine of Yale University, the dinners at Cincinnati, St. Louis, Hot Springs, Portland and Los Angeles, as well as at the more remote foreign meetings, Peiping, China, and Tokyo, Japan, are included in this booklet and are of outstanding interest.

This volume has been made possible by monies from the Milbank Memorial Fund in New York.

The JOURNAL
of the
Iowa State Medical Society

VOL. XXI DES MOINES, IOWA, AUGUST, 1931 No. 8

A MEDICAL CLINIC*

FIRST DAY

CAMPBELL P. HOWARD, M.D., Montreal, Canada

Members of the Association: I need hardly say what a great pleasure it is to be with you once more. So far I have only refused one invitation to return to Iowa, and that was unfortunately because of circumstances over which I had no control.

When your committee wrote me some time last year inviting me to attend the annual session of the State Medical Society I promptly accepted, as Dr. Parker and Dr. Bierring will bear me out. In the first place, I have made it a practice to come back every year to Iowa to see my old friends; in the second place, I was much honored by an invitation to address the State Medical Society.

When my acceptance of the invitation was acknowledged, the penalty began to be realized. Among other things I was told that it had been the habit in the past for the speaker in medicine to hold a couple of clinics and to attend the banquet, and so forth and so on. However, as you know, I am good-natured. I said "Never mind, I will bear with that." Then there was the question of the cases to be shown, and Dr. Luginbuhl and others have been hard at work getting suitable cases for such an assembly. Last evening I had the pleasure of going to the Methodist hospital and seeing two of their cases and hearing about a third from Dr. Bierring.

For some time we have been interested in pneumonia. The reason for that, of course, is that in a city like Montreal pneumonia is a very important disease. In the winter time it occupies many of the medical beds. It is associated with a high mortality, and in recent years it has offered new methods of treatment which we consider very promising. So last night when Dr. Hill showed me a case of a child who was suffering from an unusual sequela of bronchopneumonia, we agreed with him that it was a most important case to present to a group of men like yourselves interested in the general practice of medicine. I may say that this child has been under Dr. Hill's observation since February and has been most carefully worked up from every standpoint. So voluminous was the history and so many were the notes, both laboratory and clinical, that he kindly spent some time abstracting the points in this child's history for us.

The patient is two and one-half years of age. He lost his mother when he was five months of age, from pneumonia, so there is possibly, as we see often in lobar pneumonia, an inheritance of suitable soil. There is no tuberculosis in the history of the family, and there is no tuberculosis, incidentally, in this child, as we will show a little later. The birth was normal, and he was a healthy eight-pound baby. There were no feeding difficulties. He walked and talked at the normal age, and except for an attack of gastro-enteritis a year ago, when he was eighteen months old, there was nothing abnormal in his past medical history.

During his second year of life, however, he began to have many upper respiratory tract infections. All of these, however, were mild, except one, which occurred a month before the onset of this illness and which was associated with a mild attack of bronchopneumonia. Recovery was apparently complete in a week.

This present illness, for which the child has recently been hospitalized, began on January 22, 1931, with an upper respiratory tract infection, at which time, too, his sister had a cold; evidently a house infection. He seemed all right after three days, but he then developed a fever, his tonsils became swollen and his throat spotted with a white exudate.

He developed numerous rales at both bases, and two days after the appearance of the pharyngitis and basal bronchitis, his temperature rose to 106°. His breathing became rapid, grunting and labored, and his abdomen appeared distended. In addition to the numerous rales in both chests, there was an area of tubular breathing over the right lobe anteriorly. A diagnosis of bronchopneumonia was

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inevitably made, and the child was sent to the hospital.

On admission to the hospital his leukocytes were 11,700, with 70 per cent neutrophiles, a relatively high neutrophilic count for a child. The urinalysis was negative. For a week or ten days he ran a typical course of pneumonia, at the end of which time the temperature came down by lysis.

On February 10 it was noted that despite the fact that the fever was abating and the child was clinically much improved, he continued to cough a great deal, and the consolidation in the right upper lobe persisted. There were still a few rales at the left base.

An X-ray was taken on February 14 and it showed very clearly what we have already stated was discovered in the clinical examination, namely a small area of consolidation in the right upper lobe. The lung area, as is usual in the small chest of a child, was small, as compared to the abdominal contents. The heart occupied a rather central position, and an area involving the entire right upper lobe showed some peribronchial fibrosis, and a little indistinct cloudiness of the supposedly healthy side.

On February 15, then, after normal temperature for eleven days, he had a sudden rise of temperature to 105°, and his respiration rose to 48. There was distension of the abdomen and a great deal of cough. Again, the tonsils were red and spotted with exudate. Over the left lobe anteriorly was a small area of tubular breathing and numerous rales.

Somewhat later the child developed bilateral otitis media, necessitating paracentesis of one drum. Discharge was profuse and thin and was interpreted as streptococcic in origin. Cyanosis was an almost constant feature. The temperature ranged between 101° and 105°. The pulse was poor. The leukocytes, curiously enough, in spite of the second attack of inflammation in the lung, fell to 6,400, and a check count a day or two later showed 7,800 per cu. mm. Cultures from the throat had been taken in the meantime, and these revealed staphylococci and streptococci.

The impression was that the child was suffering from a streptococcal bronchitis and that there would be a serious outcome.

More on the advice of medical friends than with any particular confidence in the efficacy of the treatment, Dr. Hill tried a stock polyvalent vaccine against the common cold, the leukocytes rose and the child seemed correspondingly better. In the course of the next few days, however, there appeared in the left lung other evidences of infection, so much so that it soon became apparent that the opposite lung was being attacked.

On February 18 the X-ray plate of the chest showed involvement of the left upper lobe as well as of the right.

I neglected to say, or possibly I did not stress it sufficiently, that tuberculosis had been excluded by this time by the subcutaneous test with old tuberculin. Further repeated examinations of sputum which the child would vomit up had been negative for tuberculosis.

Then gradually the whole left chest became involved and with this there appeared signs at the left base suggesting fluid, so that on three different occasions the left chest was aspirated, and on each occasion small quantities of turbid, straw-colored fluid were obtained, cultures from which always proved negative. An X-ray plate showed the persistent or unresolved pneumonia in the upper right lobe, and the gradual spread of the pneumonic process throughout the left lobe.

The signs in the left chest now became very marked. Frank tubular breathing was heard all over the upper front and back, and numerous rales, sometimes very diffuse, sometimes absent, depending upon whether the child had had a recent coughing attack. Occasionally thick, tenacious sputum would be brought up with the vomitus. The child was still desperately ill. A small transfusion was given, 100 c.c., with definite improvement.

Finally, quite recently, the temperature began to subside, and for the last ten days or two weeks, possibly three weeks, the fever has been very slight, rising in the evening to only 99°, but the child has continued to suffer from severe paroxysms of coughing, which are very disturbing to the night's rest and to the general nutrition. Recently there appeared beginning clubbing of the finger tips. Those of us who are not accustomed to infants or children will realize the difficulty of recognizing clubbing of the finger tips, but even the most skeptical, if they look closely, will see that the little finger tips of this child are red and definitely swollen, the first stage of clubbing that occurs in any chronic pulmonary or subacute pulmonary infection.

Today the chest still shows a little area of dullness over the right upper lobe, better felt than heard, and there is still bronchial breathing of the infantile or puerile type, and numerous rales. Over the rest of the right chest, front and back, there are a few rales; but the left side is the striking side, and we hear a resistant flat note throughout front and back, over which there are intense bronchial breath sounds. Probably the most characteristic feature and the real key to the situation, is the flattening of the left chest, with diminished

movement, which can be seen in a good light, such as we had last night.

The flattening or retraction of the left chest with the diminished movement, the intense bronchial breath sounds, the numerous moist rales, and the bronchophony when the child talks, make a picture which, with the X-ray evidence, leaves no doubt in our mind that we are dealing with a form of pulmonary fibrosis, or what we used to call in English literature, cirrhosis of the lung, or which some prefer to call chronic interstitial pneumonia.

Dr. Hill has had an unusual opportunity to watch a case going from bronchopneumonia in the acute stages into an interstitial pneumonia with the usual features and the probable development of bronchiectasis. Realizing the likelihood of a bronchiectasis, he had a bronchoscopic examination made a few days ago, and Dr. James A. Downing reported this: "The trachea is drawn to the left at the bifurcation, and the left main bronchus turned sharply down and backward, so that considerable flexion of the head and neck and the chest is necessary to enter the left main bronchus. The left main bronchus is full of pus, also the superior and inferior lobe bronchus. There is considerable thickening of the mucosa, and in the first bifurcation of the lower left bronchus there is some granulation tissue on the posterior wall. The lumen of both the superior and inferior lobe bronchi are smaller than ordinary, due to swelling, and are completely filled with purulent material. Evidently from this position of the trachea and bronchi, the entire left lung is pushed backward."

That is a very comprehensive report and confirmatory of the clinical findings. Of course, further drainage will be necessary, so that "postural drainage" can be carried out. The child has made his way through repeated attacks of bronchopneumonia, ending, it is true, in chronic interstitial pneumonia or pulmonary fibrosis, but the worst, unfortunately, is ahead of him—the bronchiectasis, because there is nothing more disabling or discouraging, disabling to the patient and discouraging to the physician, than bronchiectasis. Even today there are cases that seem very difficult to control. While the possibility that repeated bronchoscopic drainage will help, and certainly the postural drainage will further help, the likelihood is that there will be some residual bronchiectasis, with its associated foul sputum, and disability of the individual, because any exertion will bring on an attack, sometimes completely upsetting the patient's stomach and leading to vomiting. Also, as you know, the affected side is susceptible to further and repeated attacks of chronic or subacute pneumonia.

I confess that I do not see many children, and yet in the course of my thirty clinical years, this is the first case I have seen in child or adult which developed fibrosis of the lung in such a short time as two or three months.

The next case is also a child of very considerable interest. This case, gentlemen, Dr. Bierring was kind enough to provide for us. The history is somewhat as follows: She was referred to Dr. Bierring at the age of seven by Dr. H. N. Anderson of Des Moines. Her family history is negative. There is one fourteen months old brother living and well. Our patient's birth was normal in all respects, and non-instrumental. Labor was short and by no means difficult.

The child was doing well until the end of the second week when it was noted that following a severe crying spell she became very blue about the lips, ears and face. After being sent home from the hospital, she had for several months gastrointestinal upsets called colic. At the end of six months it was noted when she sat up that she would fall forward in a sort of faint, but would quickly recover.

From about six to eight months of age these attacks of fainting occurred daily. She did not begin to walk until twenty-six months of age because of weakness and fatigability, and even then, at twenty-six months, could walk only a few steps at a time, when she would have to rest. She was unable to run about or play with other children.

She began to talk at twenty-one months. As she became a little older she began to have crying spells, and these crying spells would be associated with marked cyanosis. At the present time the child can walk only a short distance, not more than half a block, without becoming very dyspneic and cyanotic.

In the interval between birth and today she has had none of the common childhood diseases, and no history of rheumatic fever or so-called "growing pains," or anything belonging to the rheumatic cycle could be elicited.

The rest of the story is illustrated by the patient. The only thing that we can add is that Dr. Bierring had the blood counted, and it was reported to show a slight polycythemia, 6,000,000 reds. The differential count and the while cell count were normal.

For a child of seven years she is a little bit undersized, nothing more than that; otherwise the picture is rather pleasing. By the ordinary school standards she is above her age mentally.

When we look casually at her we can simply state that the lips are a little blue, the cheeks a

little bit flushed, but who wouldn't be under such circumstances, standing up in a chair, uncovered, before a group of doctors? When one looks a little more closely, however, one sees that there is beginning clubbing of the finger tips. The last phalanx of each finger is definitely swollen, is definitely reddened, and the finger nail is definitely incurved, with a blue nail-bed. This is true not only of the finger tips, but to a less extent of the toes.

The tongue has a blue tinge. The mucous membrane of the back of the mouth is definitely blue. On examination of the child's chest there is nothing remarkable in the way of deformity, bulging, prominence or undue pulsation, but when one puts one's hand over the ordinary apex beat or mitral area, one is struck, first of all, with the tachycardia and secondly, with the rather tick-tack rhythm.

Over the base one has more a feeling of a slight thrill. This thrill has varied, apparently, from time to time as these always do, and sometimes is more marked than others. Today it is not a very prominent feature.

Examination by percussion reveals a rather wide area of heart dullness with a slight increase to the right. Even that little exertion of being held up causes fatigue, and a slight increase in her respiratory rate is noticeable.

On auscultation there is a loud murmur occupying most of the systole, heard everywhere over the precordia, and in spite of which the second sound is definitely accentuated.

A chest plate taken a little while ago revealed a somewhat globular shaped heart, enlargement of the heart slightly to the right and a curious shadow at the right base which I will describe in Dr. Burcham's own words:

"The heart measurements, according to the Danzer method, are as follows: Slight increase in the internal diameter of the heart. Greatest diameter from the midline to the left is 6.7. Greatest diameter of the heart from the midline to the right is 2.2. Therefore the heart measures approximately 43 per cent of the diameter of the chest. The aorta is 4.3 centimers wide. The heart is especially enlarged in the region of the left auricle, with a slight bulging of the right side of the arch of the aorta."

Lastly, an electrocardiogram has been taken for Dr. Bierring and shows a typical right ventricular preponderance.

Gentlemen, of course there is no great difficulty in recognizing this case as one of congenital heart disease. The difficulty always is in specifying the lesion present. Many wise physicians (including Dr. Bierring and myself) have refused to commit themselves. He labeled her condition congenital heart disease and was pleased to let it go at that. Of course one can venture various guesses. They are of purely academic interest. The common lesion, after all, is a patent foramen ovale, usually associated with a patent ductus arteriosus, and very commonly associated with those two is a defect in the ventricular septum.

Any one of those three, or all three, may be present in this case. We do not profess to be able to decide. Our belief is that certainly the lesion belongs to the common type of a patent ductus and probably a patent foramen.

What is the importance of recognition of congenital heart lesion? Of course, it had to be recognized here because the child was ailing, and it had to be treated because the child was incapacitated to such a degree, but more important, the future of the child has to be planned. I would say in such a case that one is compelled to take cognizance of the fact that this child has a myocardial insufficiency for some reason or another. In many cases a congenital heart lesion is an accidental finding, as you know, and such individuals had best be left in their ignorance. Some of the great athletes of the world have had minor congenital lesions and some of the most active men in political and scientific fields have had congenital heart disease. If the lesion is well compensated, there is no reason to take any active steps to overcome murmurs or hypertrophy. But when there is, as in this case, a distinct myocardial insufficiency, when such efforts as walking half a block, or crying, or even as in this case, standing for a few minutes on the feet, cause fatigability and increased respiratory rate and pulse rate, something has to be done. The child has to be taken care of; kept, as it were, in cotton wool. Her education, of course, cannot be neglected, because children of this sort are often bright scholars, and they should be encouraged in every way; because their physical activities are restricted, their mental activities must find a proper outlet. Arrangements have been made for this child to enter Dr. Smouse's school where she will have an opportunity to develop mentally and be taken care of physically.

Those of us who are engaged chiefly in internal medicine will agree that if we ever have any doubt as to the type of a congenital heart lesion, and if we are ambitious enough to try and classify the individual case, we know where to turn. One of the best articles on this subject is to be found in Osler-McCrae's System of Medicine by Maude D. Abbott of Montreal. At the time that article appeared I had the good fortune to be Dr. Osler's assistant in Baltimore, and his remark, when he read Maude Abbott's article, was "it would make Rokitansky turn in his grave." Up to that time

Rokitansky's monograph on congenital heart disease was the classic, but we in the American world of medicine regard Maude Abbott's the classic of today. Anything you want to know about congenital heart disease can be found in that article.

A third and most interesting case is also provided by Dr. Bierring from his wards at the Methodist hospital. This story is even longer than the story of the first case, and so many notes have been made that I fear it would be hard to condense them, but Dr. Bierring has made an attempt to abstract nine admissions to his service in the Methodist hospital. Briefly, today this man is 75 years of age, a contractor by occupation, a native of Denmark, who has lived for many years in Iowa. He first came under Dr. Bierring's observation in 1922 because of shortness of breath upon exertion. That symptom had been present for a year to a year and one-half before the patient presented himself for treatment. He also noticed some nausea, a feeling of fullness after eating, and a poor appetite. He was then weighing around 175 pounds. He noted some swelling of the feet. He had noted orthopena at night, so that he had to sleep with his head elevated, and there was some cough.

To make a long story short, on that admission he showed an enlarged heart with clear heart sounds and an accentuated aortic second; a systolic blood pressure of only 126, with a diastolic of 68. There was a distended abdomen but neither liver nor spleen could be felt. A diagnosis of arteriosclerosis was made, with cardiac hypertrophy associated therewith.

He had some gastro-intestinal disturbance, so a test meal was given, which showed some hyperacidity. An X-ray series of the gastro-intestinal tract showed a normal gastric outline, and no evidence of ulcer or carcinoma. He returned again at the end of the year 1922, this time because of pain in the chest, radiating into the back. Not only were peripheral arteriosclerosis and cardiac hypertrophy found, but also a new feature, viz., arteriosclerosis of the coronary artery. Angina pectoris was the result.

The next cause for admission was a return of his chest pain. At this time, too, he showed, curiously enough, a definite anemia, and the anemia had a rather high color index. While it was considered as possibly primary Addisonian anemia, it was decided after further examination, in view of the presence of a high hydrochloric acid gastric content, that it was a secondary anemia.

On this admission, his third, the urine showed casts for the first time, indicating that another organ had responded to the arteriosclerotic process.

We skip over the next two admissions which are repetitions of the third and go to the sixth, when it was discovered that he had a hypertension, with a blood pressure of 170/94. You will say that is not much of a hypertension. It was not much hypertension for a man of nearly 70, but it was a hypertension as compared to his previous admissions when the blood pressure readings were only 124, 118 and 110 systolic. The blood count again showed on that admission an anemia with a tendency to a high color index.

Now we come to the next manifestation of arteriosclerosis! In addition to pain in the chest, shortness of breath, gastro-intestinal upsets, a little hypertension, he began to complain of numbness of the legs. As the case report unfolds itself, this numbness of the legs becomes more and more a feature.

I have to skip over some of the points in the interval, chronologically at least. It soon became evident that upon walking even half a block, he developed lameness and weakness and pain. His coronary arteries, his renal artery and his peripheral arteries were involved. It became more definitely localized in his crural arteries, with intermittent claudication as a result.

Later on, in addition to the pain in the legs, he began to complain of numbness in the extremities and other abnormal sensations, which suggested, for a moment, the early symptoms of subacute combined sclerosis of primary anemia. The blood was again checked, and this time showed the best count in two years, namely 80 per cent hemoglobin and 4,480,000 reds. As examination revealed no sign of central nervous system disease, arteriosclerosis was decided upon as the underlying cause of his complaints.

Then in 1928 we find a 2+ albumin, as well as casts, in the urine. Shortness of breath, pain, and intermittent claudication became more and more evident.

Next, he noted headache and dizziness, evidences of cerebral arteriosclerosis. Of course, the man has been a worker, although not a brain worker, and it is not surprising that the cerebral features have come to light rather late. He tells me that his vision is good, even to this day, and in reading over the history, it is only the headaches and the dizziness that have attracted my attention to the possibility of some cerebral arteriosclerosis.

During 1929 there were increasing quantities of albumin, in fact very marked quantities, with many granular and hyaline casts and an occasional red cell in the urine. These red cells became rather a feature.

The patient's renal function was studied. He had a normal blood chemistry, no retention of urea. He had no definite fixation of specific

gravity on the Mosenthal test, but his phthalein function was considerably reduced. Pruritus or itchiness became generalized, a sign of renal insufficiency.

The seventh admission was a year ago this March, when he was under observation, with a blood pressure of 160/80, fairly normal for his age, and only 1.2 grams of albumin per liter. At times many blood cells were still seen in the urine.

The eighth admission, which was in April, 1930, was of interest because of a severe gastric hemorrhage. Later, in the next or ninth admission his spleen became palpable for the first time, and the liver, which had always been a little bit enlarged and tender, remained so. A barium series was run for the second time because of that gastric hemorrhage. You remember Dr. Bierring's attention had been originally called to the dyspepsia, but this barium series, like the first one, proved negative.

To make matters still more interesting to the clinician, if not to the patient, about a month ago prominent veins made their appearance over the front of the chest, extending down into the abdomen to either groin. These veins showed phlebosclerosis, another manifestation of the arteriosclerotic process.

Last night I had the privilege of seeing the patient with Dr. Bierring and Dr. Luginbuhl in the ward. First of all we asked him about moving from his bedroom to a little examining room. The first thing he said was, "I have to go slowly, Doctor." And he did come very slowly. It was only a few yards from his bedroom to the examining room and he walked with a distinct limp, and very slowly, because of the intermittent claudication and because if he sped up he would have increasing pain.

There was no noticeable cyanosis of the patient's face at the end of that time, but he was definitely dyspneic. When we examined him a little more fully we were struck with the venous anastamosis which occupied the midepigastric region, extending down to the left of the umbilicus slightly, very beautifully on the right side, and on the right flank to a more marked extent than on the left. These vessels were not only sclerosed and palpable (phlebosclerosis, in other words), but they were dilated or there was ectasia present in them. That manifestation is quite rare to such a degree, even in cases of arteriosclerosis. However, we have a possible explanation for it. First of all, the examination of the legs at the present time shows what any man of his age might show, some dilated varices. After all, he was on his feet a great deal in former years. He has been a contractor, which meant, naturally, in the early days at least, manual labor, and he is said to have worked very hard. On the other hand, one feels the most definite thickening of his posterior tibial vessel on both sides. An X-ray plate of the leg shows these vessels beautifully visualized, appearing like pipe stems in either leg. There is at the present time no edema. Edema, Dr. Bierring, has not been a feature at any time?

DR. BIERRING: Only to a slight extent.

DR. HOWARD: Reversing the order of procedure we will next go to his abdomen. The abdomen is full. We could find no evidence of fluid in it. It is a thick-walled abdomen, but we could very definitely feel a spleen which reaches two fingers' breadth below the costal border, and a liver which is still a little tender; not very much, it is true, but which reaches two fingers' breadth beneath the ribs in the right epigastric zone.

Naturally we are interested in this old heart. The left border of the heart is very much displaced to the left, practically to the left axillary line, and what interests me particularly is that there is a very wide area of retrosternal dullness as well as this very large heart. The X-ray plate confirms this. There is a big left heart, a fairly large right heart, and a moderate widening of the aorta, not as wide in the plate as it is to percussion. Possibly that is an error. Possibly there is a physical reason for it. Over the base of the heart one hears a systolic murmur which has been present since his first or second admission.

Naturally one always tries to assign the various phenomena as they unfold themselves to the same disease process. Can one here? It seems to me one can, without much imagination, up to a certain point. That he has arteriosclerosis, there is no doubt; nor that this arteriosclerotic process has affected not only his aorta but his coronaries and his myocardium, as well as his kidney. The arteriosclerotic kidney picture is typical in this case, including the blood cells. We also see the evidence of arteriosclerosis in the cerebral circulation, in the dizziness and the headaches. Then we have the unusual peripheral manifestations of arteriosclerosis which do not always occur, namely the intermittent claudication, so well described by the French and emphasized in this country by Osler, as the feature of arteriosclerosis of the lower extremeties; then the associated phlebosclerosis; all of which I think can be accepted.

However, when we try to explain the appearance of these dilated veins, with the phlebectasia, and the palpable spleen, we have a little more difficulty, and here I admit we are making the punishment fit the crime.

We believe that since 1922 the man has had cardiac decompensation. We believe he has had a chronic progressive cardiac liver, the nutmeg liver.

We know (we have recently had such a case) that a chronic cardiac liver may eventually develop cirrhosis, cardiac cirrhosis, if you like. We know that this man, under Dr. Bierring's observation, has developed enlargement of the spleen, and we know that he has recently had a gastric hemorrhage, portal, no doubt, in origin, and, lastly, this beautiful evidence of portal obstruction has made its appearance, and we would venture to offer that as a theoretical explanation of the whole picture. But this picture is so rare that Dr. Bierring and I felt this case would be of interest to you.

Lastly, we have a young man here thirty-four years of age, who has been under his physician's observation for a year or two because of an enlargement of the spleen. He came under observation first on June 8, 1928, referred by Dr. W. E. Baker, because of enlargement of the left upper abdomen, shortness of breath, loss of weight and intestinal distress.

The family history was negative. The personal history was negative except that while a soldier at Camp Dodge in 1918 he had influenza and was very sick for one month, but made an apparently good recovery.

His present illness began in November, 1927, when he first noticed distress in his stomach after eating, accompanied by much bloating. In January, 1928, he noticed an enlargement of the left upper abdomen which gradually increased until it caused a great deal of dyspnea. There was not much pain. Between January, 1928, and June 8, 1928, he lost twenty-five pounds in weight.

The physical examination on June 8, 1928, was negative except for a markedly enlarged spleen and the blood count, the features of which were a secondary anemia with red cells numbering 2,500,000 and white cells numbering 141,000. A large number of myelocytes were present.

He was given repeated X-ray exposures over the spleen and thigh bones, on June 9, 11, 14 and July 24. His red cell count rose from 2,500,000 to 3,500,000 and the white fell to 4,400 per cu. mm.

In addition to that, because of the associated anemia, he was given one-half pound of fried liver a day. On September 13, 1928, his red cell count was 4,000,000 and his white cell count was still down to normal (8,000).

On May 15, 1930, he had a moderate leukocytosis, but this time only to 58,600. The spleen was then four inches below the costal border, and only one X-ray exposure was given. The patient was lost sight of until October 10, 1930, when the white cell count had again risen to 160,000. He was given another X-ray treatment and was not seen again until yesterday, May 12, 1931, when he complained of weakness, dyspnea, loss of weight and a cough. The hemoglobin is 55 per cent. His red cells are 2,270,000, and he has 28,150 whites, with 28 per cent myelocytes.

Physical Examination. The patient is of small physique and small of stature, but he is also considerably underweight. He is perhaps a little sallow. In addition to the flush of the cheek there is an underlying subicteroid tinge to the skin.

There are no palpable lymph glands in the neck, and only one or two in the right axilla, such as any of us might well have; certainly nothing abnormal.

Of course, the abdomen is the point of interest to us. Considering his poor nutrition, he has a rather "aldermanic abdomen," not perhaps the profile of a man from Canada, but still a profile!

As one palpates lightly, one feels that the spleen reaches below the level of the anterior iliac spine. This would represent the width of the spleen at this point. Here is the telltale notch which we always exact. On lifting the left hand forward in the lumbar region, one brings this mass definitely forward. The lower border is perfectly round, and I suppose the upper border reaches up into the axilla. The edge of the liver can be felt only two fingers' breadth below the costal border.. The direction of growth, the notch, the superficial character of the mass in the left upper quadrant leave no doubt about splenomegaly, but at breakfast I was talking over with my friend, Dr. N. G. Alcock, a case we have recently had in my service in Montreal which upset my pride to a great degree. This Montreal patient was an Italian, sixty-five years of age, who was sent in with a diagnosis of malaria because of chills and fever and an enlarged spleen. He had the chills and fever all right, but he was sixty-five, and twenty-eight years before he had emigrated to Canada. During his twenty-eight years of residence in Canada he never had a recurrence of his malaria, although he had been through several illnesses and several accidents. Examination of the blood showed a leukocytosis. Naturally the smears were negative for the malaria plasmodia. His urine was negative. We excluded malaria but considered it a spleen of some infectious nature, probably subacute bacterial endocarditis. My resident, Dr. Ward Allen, a very bright fellow who had been off for a little holiday, in going over the case a day or two after his return was struck by the fact that there was something unusual about this spleen. When I came to make my ward visit that afternoon he said, "Dr. Howard, I am not so sure that is spleen."

I said, "Aren't you? It never occurred to me it could be anything else. Of course, it is spleen."

He said, "Have you noticed how fixed it is?"

I said, "I do remember that, but I think he has a good deal of perisplenitis."

Then he said, "I can't feel the notch."

I said, "I had no difficulty with the notch."

However, having a great deal of respect for this young man's powers of clinical observation, I went back and palpated the supposed spleen and could not satisfy myself any longer that it was spleen. In the first place, the note over it was tympanitic, not as here, flat. In the second place, the direction of growth was more vertical, not oblique. In the third place I could no longer feel the anterior border, which I had thought was notched. In the last place, the mass was tender. So we did what we should have done a week before, investigated the case not from the infectious disease standpoint, but from the genito-urinary standpoint. We were doing repeated blood cultures thinking we were dealing with a case of low-grade septicemia.

We had an X-ray after a barium enema to rule out a splenic flexure carcinoma. We had a barium meal to rule out a carcinoma of the fundus and last, but not too late, we had the urologic specialist in consultation. Dr. F. S. Batch, our urologist, a very cautious, well trained fellow, said: "It isn't spleen, but I am not sure that it is kidney and will not give an opinion until I have done a cystoscopic examination and seen the pyelograms."

He did both. The left pyelogram could not be made because the left ureter could not be entered. The cystoscopic examination revealed no urine or anything coming from the left side. There was evidently a complete block to the left ureter. Later he made an incision in the left flank and drained out about a pint of foul pus. The mass is still there. He considers it a pararenal or perirenal infection, with possibly a primary tumor of the kidney. However, this case before us today is an open and shut case. A third year student could make the diagnosis of spleen, and a technician could make a smear and say, "Enormous increase in the leukocytes," but a mass even on the left side is not always spleen. One should always differentiate a carcinoma of the splenic flexure, a carcinoma of the stomach, and, above all, a kidney tumor of some sort.

SECOND DAY

Some of you may remember my interest in aortic disease. On two or three occasions I had the opportunity of presenting to the medical profession a series of cases of aortic lues. Every city has them to a greater or lesser extent; Des Moines is no exception.

When I was taken yesterday to Broadlawns by Dr. Saunders, we found there a very good illustration of this condition. The patient, fifty-eight years of age, a laborer by occupation, had originally been admitted to Broadlawns for dizziness, shortness of breath, pain in his chest and abdomen. The family history was negative, his father having died from pneumonia and his mother from old age; two sisters and one brother are living and well.

There was no history of tuberculosis in the family. He himself had worked hard and enjoyed fair health. He admitted to a primary lesion in 1906, twenty-five years before we saw him. This was a very minor affair and healed in three or four days without local or general treatment.

In addition, he had had many of the severe infections, including pneumonia and typhoid fever. The story for which he came to Broadlawns dated back four or five months when he first noted shortness of breath on exertion, dizziness and generalized pains in his arms and legs. In addition, he had lightning-like pains occurring in the thorax. For the past year he had some cough, and this symptom had gradually become worse. On examination at admission the signs were very much as at present.

The urine proved negative except for a possible trace of albumin. The blood count showed a very slight reduction of the reds, a more definite reduction of the hemoglobin (to 60 per cent), and a normal leukocyte count, with a normal differential count.

As we know, this good patient belongs to a race which is especially susceptible to this infection and to this sequela. In Baltimore, in Osler's day, the colored wards were full of this disease, so that one is not surprised to find the same thing true of the race in Iowa.

On physical examination one sees that he has lost some weight, although not a remarkable amount. The pupils are not contracted, and are in fact moderately dilated, but they react only very slightly to light. In other words he has an Argyll Robertson pupil.

We also find that the knee jerks are lost, so that the Argyll Robertson pupil and loss of knee jerks represent two striking features of tabes dorsalis.

On examination of the chest, one is again immediately struck with dilatation of the superficial veins of the lower thorax and the upper abdomen, suggesting, naturally, some obstruction to the return of the venous flow in the thorax. Careful inspection, even in the good light of Broadlawns yesterday afternoon, failed to reveal any local bulging or any local visible pulsation either in the front or the back. We are always careful to inspect the back as well as the front, but we could see no pulsation locally anywhere in the thorax.

With bimanual palpation one felt a very distinct valve shock over the base, and an indistinct but suggestive thrill over the aortic cartilage.

On percussion the arch of the aorta is found to be widened to the right and to a less but still a definite extent, to the left. His heart dullness is enlarged to the right, but more particularly to the left, where it reaches to a point well outside the nipple line.

On auscultation one makes out very well a rough murmur, systolic in time, increasing as one approaches the base and reaching maximum intensity over the aorta. On listening a little bit more carefully one hears with each diastole, a soft, indeed a very soft, short, echoing, diastolic murmur. Thus, we have signs of an enlarged heart, a widened aorta, and an aortic systolic and aortic diastolic murmur.

On feeling the radial pulses one finds that they are about equal, and they certainly are synchronous. I think the left one seems a little smaller in point of size than the right. The pulse is a little rapid, but it is not strikingly Corrigan in type. The leak at the aortic valve must be slight if one can judge by the degree of water-hammer that the radial pulse manifests.

That there is marked arteriosclerosis is obvious when you look at the inner side of the arm and see the tortuous vessels pulsating almost out of their bed. It certainly manifests the characteristic appearance of an artery with a slight aortic leak behind it.

The blood pressures are not remarkable. They have been in the neighborhood of 140/60. It is not a very high tension case. There is no tracheal tug. The patient has no loss of voice or hoarseness. While we have not inspected his larynx, one can judge from the character of the voice that there is no laryngeal paralysis. The cough has not that stridulous character that one associates with pressure on the recurrent laryngeal nerve.

Then to come back to these veins which form a cuirass over the lower front of the thorax and upper abdomen, extending down to anastomose with the veins of the lower abdomen, one has to admit that there is an obstruction somewhere in the upper thorax, causing difficulty to the return of the venous blood. Inspection of the chest, as we have said, reveals nothing more remarkable than that.

Going over his lungs a little more carefully, because one of his complaints was a cough which may have been of aneurysmal or pulmonary origin, one finds an area of impaired percussion over both the upper fronts, but more particularly over the right upper front. You will admit that, if this race is prone to lues, it is also prone to tuberculous infection, and one naturally demands an examination of the chest by fluoroscopy and by skiagram. Yesterday, in listening over this impaired area of the right upper front, I was struck by the absence of moisture, but Dr. Saunders and the internes of the hospital told me that on several occasions they as well as others had heard fine crepitant rales over both apices.

The plate of the chest shows a moderate enlargement of the left ventricle, and slight enlargement of the right. It reveals a rather high diaphragm on the left side, with the bubble of gas in the stomach, and extending out from the hilus of the right lung, a most irregular wavy shadow which I have never seen in ordinary tuberculosis. This area is almost triangular in shape. One sees, also, extending up into the right apex the same strands of connective tissue, and then an area of density.

In the left hilus there is a corresponding area. Nowhere does one see throughout the lung the ordinary characteristics of an active tuberculous infection. It is true that here and there are areas of greater density that suggest calcification.

We believe, although it is not yet proved, that as has been suggested by the clinicians at Broadlawns, the changes in the lung are due to the same pathologic process that is present in the aorta, and that that is a form of fibrosis of the lung of syphilitic origin. Some of you may remember, (at least those of you who are interested in the chest) that several years ago we described four cases of pulmonary syphillis occurring in our service at the State University. Most of them, as I recall, were sent to us by Dr. Scarborough of Oakdale because of the absence of tubercle bacilli in the sputum and the absence of other positive evidence of tuberculosis, their unusual course, and the suspicion in his mind that there was something in the lung other than pulmonary tuberculosis, although three of the cases had been sent to him labeled as such. Their skiagrams were very similar to this in their general appearance, although, as I recall, several of them were basal in distribution. The involvement of this apical site, of course, leaves the question more open to doubt.

In any event our patient's blood shows a positive reaction to the Kahn test. To recapitulate, we have a history of a primary lesion twenty-five years ago without secondary manifestations, an undoubted tertiary lesion and the tabes, as shown by the Argyll Robertson pupil and the lightning-like pains he has had in his legs and chest, the unqualified enlargement of the heart with aortic insufficiency, and a lesion in the lung which is not typical of pulmonary tuberculosis. In short, we feel justified in supporting the suspicions of the clinicians at Broadlawns that we are dealing here

with aortic syphilis and aortic insufficiency, though no aneurysm is demonstrable as yet, and a lesion in the lung which resembles the pulmonary fibrosis that one sees in the rare case of pulmonary lues.

The therapeutic test will be of great interest. Already they have started him on massive doses of potassium iodid, increased until he gets 60 grains of the drug a day. In addition, he is receiving mercury in some form. After a week or ten days of such treatment, small doses of salvarsan or neosalvarsan will be given and the condition watched with great interest.

In Montreal we have a great many cases of aortic lues with or without aortic insufficiency, but we no longer see, as we used to, the later stage of aortic aneurysm. Only two cases in the last twelve months, in the very rich material of the Montreal General hospital, have shown an aneurysm. One case was an abdominal aneurysm in an elderly man who was admitted as an acute surgical abdomen because of severe pain, progressive intestinal obstruction, and the discovery of a mass in the abdomen which was hard and somewhat tender. My confrere, Dr. A. H. Gordon, who was called in consultation by the surgeon who had made a diagnosis of retroperitoneal sarcoma, felt the mass in the abdomen but had the temerity in these days of the rarity of aneurysm, to make a diagnosis of an aneurysm of the abdominal aorta with a leaking sac. The surgeon agreed with the possibility of that diagnosis. In any event, the man was failing so rapidly since he was losing blood by this time by the bowel, that nature was allowed to take its course. At the postmortem a large aneurysm of abdominal aorta just above the bifurcation was found which had a small erosion of the wall in one region and had expelled large quantities of blood into the retroperitoneal tissues.

The other case was one of mine, a patient who was sent up with a diagnosis of mediastinal tumor and aortic insufficiency. Dr. C. C. Birchard, one of the outdoor physicians, had suggested the possibility of two conditions, a tumor in the mediastinum, or aortic lues because of a positive Wassermann. We discussed the matter with him and he agreed with my contention, "Why make two diagnoses when one would suffice?" However, the patient had been fluoroscoped and revealed no sac and no evidence of pulsation in the aortic shadow. The man was suffering great pain with radiation down both arms, sufficiently severe to keep him awake at night, suggesting a mediastinal tumor of independent origin.

We gave him intensive antiluetic treatment, potassium iodid, mercury, bismuth and salvarsan, and in spite of the improvement in the patient's pain, we gradually saw develop in the course of weeks, in the posterior mediastinum, a shadow which fluoroscopically faded and intensified and faded and intensified with such regularity that it could only be due to a small, saccular aneurysm in the posterior mediastinum. Of course, this case is not yet proved, but accepting it at face value, in the last twelve months, among thirty or forty cases of aortic syphilis, only two have gone on to the formation of aneurysm.

Dr. Saunders was kind enough to look up the autopsy material of two cases of aortic syphilis they have recently had at Broadlawns, and I take this opportunity of passing these beautiful specimens around. I never saw these before, but if I have ever seen a typical aortic lues, I see it before me now. You will note in the one at my left the great dilatation of the ring, the comparative immunity of the valve, the oak-bark like appearance of the lining of the aorta. In this other specimen there is more dilatation of the ring, but the same characteristic oak-bark appearance of the intima. Naturally one would find after some search in these specimens the tell-tale spirocheta pallida.

Dr. J. E. Dyson asked me to see this patient yesterday with him, and offered it for today's clinic, believing that it would be one of great interest to you all. It certainly is a very interesting case to me. This child is five years of age. The father and mother are both living and well. There is an older child who is also perfectly well. This child's birth was normal in all respects. Its early days of life were normal. The mother was a trained nurse and knew how to care for and feed the child correctly, consequently it never had rickets.

During this past winter the first illness occurred, an upper respiratory tract infection, an acute pharyngitis, which was followed shortly by a bronchitis, manifested by rales, diminished breath sounds and a fever of 104° which lasted three or four days. There was considerable prostration with this, but recovery occurred in one week's time, and the child was soon up and around, playing out of doors in fine weather. Following this the mother noted two things: first, that the child was not eating as well as usual and, second, that it was paler than formerly. She admits, however, that the child had always been a very fair skinned individual, coming honestly by it from the mother and, to a certain extent, from the father, and that when she looks back now she thinks that this pallor probably antedated even this infection. However, following the infection, the child showed anorexia and a definite pallor.

During the first week of April it met with a slight accident; in fact, fell down two or three steps, striking its left side. There was no imme-

diate result noted. The child did not vomit, did not complain particularly of pain, but the mother is sure that from that date, April 5, the pallor, if present before, had definitely increased, and with the increase in pallor, there was more loss of appetite.

Two weeks later, or, to be exact, on April 17, the patient was brought to Dr. Dyson's office because of fatigability and this pallor. The mother had noted also for four or five days that the child was short of breath on slight exertion. It perspired a good deal in its sleep and had a frequent desire to urinate and defecate. It also complained of fullness of the abdomen.

Examination by Dr. Dyson on that date revealed a temperature of 99.5°, a marked pallor, poor nutrition, clear lungs, and a rapid heart, with murmurs over the base and even over the mitral area. These murmurs were difficult to classify as organic. The abdomen was large. The liver was three fingers' breadth below the level of the costal border, and the spleen was very much enlarged, reaching to the navel.

There were no lymph glands palpable other than a few, the size of beans, in either inguinal region. The tonsils were enlarged. Very careful search over the child's body revealed a few tiny petechiae. The stool was free from blood. The urine was negative. Hemoglobin estimation revealed 45 per cent, red cells 2,500,000, a marked anemia, then, of the secondary type, and the leukocytes were 7,800. The differential count showed that the predominating cells were the small lymphocytes, (50 per cent), and the large lymphocytes (34 per cent). There were many large and immature cells of undetermined type. In the smear the platelets seemed diminished, though no actual count was made. The red cells were irregular in size and shape, and there were many ring forms.

The child was put on treatment and asked to report again in a few days. On this occasion, in addition to petechiae, several ecchymoses were seen over the leg, but the child had no bleeding from the nose, no bleeding from the gums and, as far as the record states, no bleeding from the bowel. There was the same rapid heart, there was the same systolic murmur, and the leukocytes were still low, 8,200. It was decided, accordingly, that the child had some form of anemia, and the possibility of an infantile splenic anemia was entertained.

As the blood had not responded to medical measures, a small transfusion was given on April 23, the mother being the donor. Following this small transfusion, there was a prompt rise of 500,000 in the red cells and 15 per cent in the hemoglobin. Another week went by and that gain was lost, and on May 11, the beginning of this week, the child's hemoglobin was 45 per cent, reds 1,580,000, and the whites 5,600. The smears showed practically all lymphocytes. We have the smear in our pocket and if anybody is especially interested in pediatrics or hematology, Dr. Dyson and I would be glad to have you see these smears and offer any suggestions.

We went to the patient's home yesterday with Dr. Dyson and found this little child just awakening from a nap in its crib. It was quite glad to see us, as it apparently is to see you. It took quite an interest in our visit. Of course, by this artificial light one may not be struck with the pallor, especially in such a little fair-haired girl as she. However, when one looks a little more closely, one sees, first of all, a little puffiness of the eye-lids, and secondly that not only is the face very pale but the fingers and nail beds are strikingly pale. The nutrition is really very well maintained. One can not say that for a five-year-old child she is very poorly nourished. The tonsils, by the way, are a little enlarged. We felt for enlargement of the lymphatic gland and confirmed Dr. Dyson's observation, that only a few in the ilio-inguinal region were affected.

Through the thin delicate skin one sees the veins and venules but there is nothing striking to be made out in the skin of the trunk.

The chest now reveals no bronchitis, but one notes the very marked rapidity of the heart sounds and the presence everywhere of a systolic murmur, probably of hemic origin. The thing, of course, which interests us most and for which we are showing her to you today, is the prominent abdomen. I should say there is no sign of rickets. The child never had rickets, was a breast-fed baby, and afterwards was intelligently fed by a trained nurse and under supervision. At no time has it shown rickets, and there is not the slightest trace of late rickets now to be found.

On examining the child's abdomen with the patient sitting up one feels, in the first place, in the left upper quadrant, extending down to the level of the umbilicus and just below, a firm superficial organ which has the characteristic notch in the anterior surface, which moves freely with respiration, and which can be lifted forward and pushed back in the typical manner of a splenomegaly. The edge of the liver can be felt as well as percussed, three fingers' breadth below the costal border.

There is one petechia on the inner side of the leg, and one sees over the dorsum of this foot, one or two fading ecchymoses. The one, the mother says, has been here a long time and never disappears, but the child has never bled from the nose

and never bled from the gums and never had melena.

This case is one of great interest and I hesitate, with so many pediatricians present, to offer an opinion. One thing I have learned, and that is that splenomegalies and anemias in infancy are not easy to classify. One thing I can say to you all is beware of splenomegalies and anemias in childhood; avoid a diagnosis or rather a specific diagnosis as long as possible.

Naturally, the first thing that we all think of, we older clinicians at least, is von Jaksch's anemia. You remember von Jaksch described a type of anemia in childhood with splenomegaly which has since been very much misused, and almost every case of enlarged spleen and anemia has been called von Jaksch's anemia. Undoubtedly in von Jaksch's original description he included a lot of cases which did not belong to the same group.

The typical von Jaksch's anemia, however, as we recognize it today, is an anemia in a rickety child with usually some adenopathy and also an enlargement of the spleen, a secondary anemia picture with various types of cells. This child does not have rickets, and has never had rickets, if my observation and Dr. Dyson's history are correct. It certainly has a secondary anemia with a very large spleen. One is tempted, therefore, to say that this is not von Jaksch's anemia, but is some other splenomegalic type of anemia. What are we to consider? In the first place, does splenic anemia, true splenic anemia in the Osler sense, occur in infancy and childhood? In our experience, very rarely. Of course, not being pediatricians, we do not see all the anemias, but in our hospital contacts true splenic anemia in infancy and childhood is a great rarity. Splenic anemia is a disease of adolescence, beginning usually in the third decade. Is it an atypical aleukemic leukemia? Well, we have three blood counts before us, and so far no really typical pathologic cells have been found; it is true that fifteen per cent in one smear were difficult to classify. The prevailing type was the lymphocytic cell.

It is hardly likely, with such a progressive anemia and such progress in the enlargement of the spleen, that we are dealing with atypical leukemia, and still have no evidence in the blood studies.

Fourthly, we have to consider acquired hemolytic icterus. There is no family history of it, and it is of recent origin and we therefore have to say that it is not congenital nor familial, but acquired. There is no tinge of jaundice in this child's sclerotics. There is no evidence of bile in the urine, and while the fragility of the red cells has not been tested, I doubt very much if that will yield a positive result. In our experience, when acquired hemolytic jaundice does occur in infancy and childhood, it is very apt to be associated with marked and definite jaundice of the sclerotics and skin, and urobilinuria.

We are left, therefore, with just the second possibility; namely that this is an unusual illustration of Banti's disease, if you want to use the popular term today, or of a true splenic anemia in childhood. This is, I believe, Dr. Dyson's diagnosis and I am prepared to accept it for the present.

As to what can be done for the child, naturally that is of much more importance to the parents. First of all, we should recommend repeated small blood transfusions. After the blood count reaches a fairly normal limit again, and after a careful platelet count has been done (by an experienced technician or hematologist), there should be X-ray exposure over the spleen. Every week the platelets should be counted because already there is an impression gained from direct examination of the smears that the platelets are reduced, and because there is already an indication of tendency to hemorrhage into the skin. We all know that massive doses of X-ray over the spleen will produce further destruction of the platelets and greater tendency to bleed. If this be given cautiously, however, we feel that it will help to decrease the splenic activity and probably restrict the tendency to anemia.

Then after two or three or four such courses of X-ray therapy, if the blood holds up under the transfusion, we would recommend a splenectomy under skillful hands. In our experience, in adult cases splenectomy is rather assisted than interfered with by previous X-ray treatment. It is better to have some adhesions and a less vascular and more fibrotic spleen, than to have a big vascular spleen and no adhesions. I know some of the surgeons will stick out their tongues at such an idea, but our surgeons in the Montreal General Hospital will agree with me that they have less difficulty in removing spleens in cases which have received X-ray treatment than in those which have not.

Certainly something of this nature has to be done sooner or later, and after the transfusion and X-ray, splenectomy, I think, will be indicated. As I say, it is possible that this child will respond to blood transfusions alone. It is quite possible that the spleen will go down of its own accord. It is quite possible that deep X-ray therapy may not be necessary, but I think it is more than likely that all three procedures outlined will have to be carried out.

This third case is a patient that we saw yester-

day in Broadlawns, where he had been admitted on several occasions for various complaints, one minor surgical scalp wound, and more recently, for pain in the abdomen and vomiting and a right-sided rupture.

The family history was that his father had died from a cancer at the age of eighty-three. His own past history was strikingly negative—apart from some abuse of alcohol.

For the last week before his admission in December, 1930, he had been complaining of cramp-like pains in the abdomen. The night before his admission he had a vomiting attack. He had had similar vomiting attacks for the past six months or a year following the use of alcohol. These attacks lasted for several days, after which he was all right. As far as the rupture is concerned, he had had it since childhood, and it had never caused him much discomfort. He had worn a truss but on this occasion he could no longer escape the surgeons and a right inguinal herniotomy was performed.

Following that the patient did fairly well but was recently readmitted to Broadlawns because of shortness of breath, swelling of the feet and ankles, gas in the stomach, and cough. There was nothing to add to his past medical history, but these new symptoms made their appearance between the operation and this admission.

Examination at this time revealed a fairly well preserved man for his age but with a somewhat hepatic facies. One is not very much struck with the dilatation of the venules of the face which is no more than any outside worker has, but we would stress the thinness of the face and the icteroid pallor.

The chest revealed some myocardial insufficiency and some diffuse bronchitis, but these were not particularly striking.

The abdomen revealed a marked prominence of the veins in the flanks and a pouting umbilical hernia. This pouting umbilical hernia could be reduced with great ease when slight pressure was applied to it. There were no palpable veins in it. It was not a "caput medusae" as I first thought.

On the lower abdomen are the marks of three paracenteses. Two to three to four liters have been removed on three separate occasions. The fluid was straw-colored and clear. On no occasion, even after the tapping, has the liver been palpable. Yesterday, on percussion, one found the liver dullness did not quite reach to the costal border and gave only an area of a hand's breadth; my hand's breadth, it is true, is a pretty broad one, but still less than the ordinary area of liver dullness. So that there is diminution of the volume of the liver.

Yesterday I made out a very distinct enlargement of the splenic area on percussion. The splenic area in the left lower axilla is even now as flat as can be. Once or twice I felt, and can still feel, a round margin just at the costal border which I take to be spleen. Certainly if the spleen is not palpable, it is enlarged to percussion, whereas the liver is diminished in size. The presence of fluid can still be readily demonstrated in either flank, and we have no difficulty in percussing out dullness in the lower front and in the flank. It transmits a wave beautifully when one tries succussion impulse.

Thus, he has dilated veins, an enlarged abdomen from ascites, a shrunken liver on percussion, and an enlarged spleen on percussion, the edge of which we think can also be felt. There is at the present time no edema. We are dealing with a classical picture of Laennec's portal cirrhosis occurring in an individual of forty-nine years of age, some months following the toxic gastritis syndrome.

We are likely to have these cases with us always, in spite of laws and regulations, because it is just this type of individual who naturally recognizes no laws or regulations. We still have no doubt in our minds, after thirty years of hospital experience, that the great exciting factor in cirrhosis is alcohol. It does not matter whether it is the alcohol itself or the impurity in it—it is the alcohol. We always have in our wards in the Montreal General Hospital four or five of these cases. I know that such authorities as Mallory and others have suggested other factors, such as copper, and their word carries a great deal of weight, but I think I am with the majority of the medical profession who still feel that whether it is the impurities, such as the copper, or whether it is some other substance in the alcohol, this type of cirrhosis is usually associated with abuse of alcohol, though not always. We see cases, of course, of luetic cirrhosis. We see cases to which we can assign neither lues nor alcohol as etiologic agents. We see cases of some form of cirrhosis, described by that vague term, "Banti's disease." We see hemochromatosis in which we are dealing with a pigment disease, or disturbance of the pigment metabolism, and not with alcohol.

There is no doubt that there are other causes for cirrhosis, just as there are other causes for aortitis, but we will agree, I think, that the majority of our cases of cirrhosis that we see year in and year out occur in people who have abused alcohol and very often who have worshipped at other shrines. It is very common to find in our patients with cirrhotic livers a positive Wassermann as well as a history of syphilis.

We had hoped to present a case of "Banti's

syndrome" but the patient has not appeared. May I just say this: We are very much interested in the so-called Banti syndrome. In our service in recent years we have had so many cases that have been labeled by some member of the staff as Banti's disease that we have become a little curious as to the true nature of Banti's disease. I do not know how the majority of my audience feels but, I was taught, and I believed it until quite recently, that Banti's disease was the third stage of splenic anemia. It is true that Banti described a syndrome independently of the publications of Osler in this country and of some of the English and French clinicians. Osler held that there were three stages in the development of the disease, first, splenomegaly, often primitive, then a gradually developing anemia, and thirdly possibly after eight or ten or twelve years, the appearance of cirrhosis of the liver with all its sequelae. I have believed that and taught that, but in the last two years I have learned to modify this somewhat. That is the only thing I want to say to you about Banti's disease. We have had recently at least two cases of advanced cirrhosis of the liver in young men under thirty years of age, with negative Wassermann tests and negative alcoholic histories, who came in because of loss of blood from the bowel, loss of blood from the stomach and with ascites. After tapping, we could feel an enormous enlargement of the spleen and a well marked enlargement of the liver. They were operated upon and showed a portal cirrhosis of the liver and a very large spleen, out of all proportion to a spleen even in the splenomegalic type of cirrhosis.

Furthermore, Lawrence Rhea, our pathologist, whom I referred to yesterday, and who is a Welch-Mallory-Councilman trained man, tells me that he has learned to recognize in the gross, the spleen of the Banti syndrome; that it is a much drier spleen, if it has been removed from a patient who has bled in recent times, and that, as a rule, it cuts more firmly than the spleen in ordinary Laennec cirrhosis, and, that microscopically it has a histologic picture which he thinks cannot be mistaken. To my chagrin, two of the cases that I called cirrhosis of the liver of the ordinary toxic type, he classified as Banti's syndrone and showed me in the gross and in the histologic studies of the spleen, good reason therefor. Up to this time, I have not found a good, clean-cut description of the distinction between Banti's spleen and the spleen of ordinary cirrhosis of the liver, but according to Rhea it is in the literature, and some day he will find it for me. In any case, he can recognize it in the gross and under the microscope. Therefore, if this be true, we have to admit that sometimes Banti's syndrome occurs without the old story of years of splenomegaly and then years of anemia, and that it may manifest itself by the sudden appearance of portal symptoms, the spitting of blood, the ascites, and the big liver and big spleen.

I am now prepared to go back on my conservative stand of former years and accept such cases if they are proved by a histologist of repute, such as Lawrence Rhea. Some of you may have reached that state of mind ahead of me, and if you have, you have been at a distinct advantage, because we feel that if there is any question of a doubt, if there is no alcohol and no lues, if there is no other probable factor such as hemochromatosis, such patients should be explored and have a splenectomy performed.

One of our two patients that we speak of was a man with an alcoholic history, who, unknown to his family but to my knowledge, had been drinking hard at the club, came under my observation in consultation practice because of hematemesis and signs of cirrhosis of the liver. I agreed to the wisdom of exploration of the abdomen and to the removal of the spleen. Four years have gone by and the patient has had no further hemorrhages. He is not altogether wearing a blue ribbon but wears it most days in the week, and he has enjoyed good health. This young man, who is 36, is, I think, a case of Banti's syndrome.

MILD AND BRIEF FORMS OF MANIC-DEPRESSIVE PSYCHOSIS AND THEIR TREATMENT

GEORGE E. NEUHAUS, M.D., F.A.C.P., Omaha*

Under the term "cyclothymia" are grouped cases of manic-depressive psychosis running a much milder course than the classic type of the disease. These cases as a rule do not require confinement in a mental hospital but can be taken care of in a general hospital or even at their homes, provided certain important precautions are observed. While many of the patients belonging in this group show symptoms plainly characteristic of the manic-depressive psychosis in others, especially of the depressed type, the condition is not recognized and the symptoms are attributed to other conditions, either actually non-existent or of only secondary importance. These cases in which the typical, easily recognized mental symptoms of the disease are only suggested, or hinted at, as it were, with other symptoms overshadowing them, are the subject of my paper. While they are rarely correctly diagnosed it is of the greatest importance that they should be recognized, because only then can certain dangers be guarded against

*Assistant Professor of Neurology, Creighton University College of Medicine.

efficiently, and certain far-reaching prognostic conclusions made and appropriate treatment given. As the depressions are more common and offer greater difficulty in diagnosis than the manic attacks, they will be taken up in greater detail.

The three cardinal symptoms of the classic manic-depressive depression are, psychomotor retardation, difficulty of thinking, and emotional depression. In other words, the patient is extremely inactive, he sits or lies more or less motionless in one place and when he does move, his movements are slow and considerable time is required for their initiation. He complains of his thoughts coming slowly, that it is difficult for him to grasp things, and that he cannot exert his will as he did formerly. Emotionally he is profoundly depressed, and he suffers from an extreme feeling of insufficiency and from an inability to experience any of his former emotional reactions; he complains that he has no feeling for anybody, parents, children, or friends.

Ever present in these patients is the danger of suicide. This danger is less during periods of the most complete motor inhibition because then the patients are unable to carry out any intention of suicide which they may have. But it is extremely great either before this psychomotor inhibition develops or after it begins to lift when there is greater freedom of voluntary activity.

These are the cases which are readily enough recognized, but many cases exist where these mental symptoms, which have been outlined briefly, are only very shadowy and where instead, physical complaints are emphasized by the patient, so that his does not appear to be a so called "mental" case. In the severe depressions the mental aspect of the symptoms is paramount. Feelings of failure, self-accusation and delusions of sin, and a profound, hopeless despair with death-wishes overshadow the physical component to such an extent that the patient even denies being ill at all. He will state that his suffering is a punishment for some act or omission of his, or some moral delinquency.

In the mildest forms, which we are considering, the physical components of these affective states become insistent. The patient complains of weakness, black spots before his eyes, roaring in the ears, headache, and sensations referred to the region of the mediastinum or the epigastrium, but he can describe none of these symptoms accurately. Hysteriform syndromes temporary in character, such as fainting spells, attacks of dizziness, or crying spells, are not uncommon in these patients. In some the distressing sensations are referred to the sexual organs. Many present a picture resembling the neurasthenic syndrome and they are often enough treated accordingly. They often speak of pain, but closer questioning will disclose that what they call such is really not true pain. "Perhaps pressure is the correct term," the patient will say when pressed for a detailed description. Some put it in words like these: "I have a funny feeling here which makes me feel awful bad." The more articulate patient may tell you that he has a most disagreeable, distressing feeling which in some way compels his attention in spite of every effort not to notice it. Contrast these indefinite statements with a patient's description of a migraine headache, the pain of a gastric ulcer, or of a neuralgia. Here there is actual, intense physical pain, and the patient's description conveys a clear, definite idea as to its location, intensity and character. The vague descriptions of painful sensations related by the depressed patient carry a hint that not too much importance should be attached to the local sensation and that the intense suffering comes from the emotional state. These sensations arise in the autonomic centers of the nervous system which largely control our emotional reactions.

The inhibition of thought and of motion as seen in the graver cases of manic-depression, can even in these light cases be recognized in a certain lethargy or a disinclination to exertion. The patient who has been ordered by his physician to take some physical exercise will find many reasons why he is unable to comply with the order. The feeling of insufficiency often makes the patient disinclined to go about his affairs, he takes to his bed and tells his family he is too ill to go about in his accustomed way. The physician, thrown off the scent, looks for some general condition or visceral pathology to explain the symptoms. Intelligence defect is never produced by this disease, but the ability to work declines rapidly, increasing the patient's suffering because he is painfully aware of his inability to carry on as before.

These patients have at times obsessive or hypochondriacal ideas. One patient worried constantly lest she be injured or seriously bruised while riding in an automobile, or from being jostled in a crowd. While in the hospital she was tormented by the idea that she might in some manner become infected from the thermometer, the nurse's hands, or the toilet. When her depression, which lasted several months, had disappeared, she was able to laugh at these phobias. This patient however, had always been, even when entirely well, of a rather scrupulous and finicky type.

When a typical uncomplicated case of this type is examined physically, often nothing of any importance is found or the conditions discovered have only a slight relationship to the psychosis. One

frequently finds complicating conditions in either the gastro-intestinal or genito-urinary tract, or a pelvic disease of some kind. Occasionally these conditions are of sufficient importance to demand treatment, and improvement or cure of the patient will then be attributed to the relief of these complications. It cannot be denied that relief from the additional load of physical disease may considerably hasten the patient's recovery. Nevertheless it cannot be emphasized too strongly that in the absence of a correct diagnosis, these depressed patients are only too often operated on for some trivial condition which, in the absence of the psychosis, would never have caused them to seek medical aid. Or these patients are subjected to therapeutic procedures which happen to be fashionable at the moment. Gastric lavage at one time was a favorite method of treatment for so-called "nervous dyspepsia."

A brilliant oculist of Philadelphia years ago believed that most nervous troubles could be cured by the relief of eye-strain, and some patients belonging to the class under discussion were given glasses. Frequently gynecologic manipulations, from the fitting of tampons and pessaries to the performance of ovariotomies and plastic operations, are resorted to. I know of a patient belonging in this group who was operated on for a supposed gastric ulcer, although his condition was merely the epigastric distress so frequent in these cases.

Appetite is poor as a rule although at times a patient complains of excessive hunger. Sleep is greatly diminished, often so much so that one wonders how the patient can get along with as little sleep as he obtains. Temperature, blood and urinary findings and blood pressure show no uniformity. Pulse and respiration correspond to the emotional condition. The basal metabolic rate may be increased during periods of great agitation. In women, menstruation disappears, to return toward the end of the attack. The relatives and the patient herself obstinately persist in their belief that if she could only be made to menstruate she would speedily get well.

The most important symptom from a practical standpoint is the persistence of death-wishes, which are as constantly present in the mildest as they are in the severest depressions. Attempts at suicide are frequently made and succeed only too often. An attempt of this kind may be the first indication that the patient has more than a simple neurosis. The duration of these mild cases varies from very brief attacks to many months. Kraepelin, Bleuler, White and Jellife, and recently Paskind, have mentioned cases that have lasted only days, and some only a few hours.

The diagnosis of these mild cases is frequently missed because it is not as widely known as it should be that they bear only a very slight resemblance to the classic form. A carefully taken history and a close analysis of the symptoms are necessary. We may learn that the mood of the patient has always been subject to variations or that either father or mother or some other near relative has shown such traits or has been "nervous." Some help may come from a study of the character of these patients. They usually belong in the syntonic group as opposed to the schizoid. Their friends know them as sociable, humorous, goodhearted and friendly individuals who take life on the whole cheerfully. They are lively, perhaps irascible, but they have warmth of character and their emotions are consistent with the situation of the moment. If their fundamental mood however, swings more to the depressive side, they are people who are never able to enjoy themselves as others do. They have quiet, gentle natures, perhaps a little too sensitive, and are apt to take things too hard. We may find that the patient has always swung alternately for long periods of time from one of these moods to the other. It will help if we can find that the patient has had depressions in former years, especially when these have shown symptoms similar to those of the present breakdown, because it is characteristic of manic-depressive attacks that they resemble each other closely. As one patient stated to me, she begins to get nervous and then she has to go through the whole thing over again.

Depression due to visceral disease is not uncommon but it varies in several respects from the manic-depressive form. Henry Head describes it well. He says, "It comes in paroxysms without reason and forces the patient to seek some solitary place. If it attacks him during a meal the patient will rise and leave the table as if to vomit. He will sit in some obscure corner of the ward away from his fellows . . . he will seek some solitary place . . . where he may weep, and yet he is unable to say why he is miserable or why he weeps. To be spoken to only deepens his misery . . . if the depression has lasted a long while or has recurred frequently these patients may have a vague desire that the end may come. But the majority spurn the idea of suicide, and in the few cases that ever really entertain the idea, the motor acts necessary for the fulfillment of the impulse immediately remove all desire for self-destruction." This last sentence points out the most important difference between the depressions accompanying visceral disease and those which form the subject of our study.

In close relation to this idea of suicide stands

some idea of unworthiness, the equivalent of the delusion of sin of the classic type of case, but it is generally so vaguely expressed that it is not easily recognized. It may take the form of the patient regretting that he had undertaken a certain thing. Another man repeated the statement that he was a coward. For instance, a young man was brought for treatment by his father who was worried because the patient's mother had had several major depressive attacks, and the son seemed nervous. The latter protested, saying that he was not ill, but that he might need a rest, as he had been working very hard on some real estate deals. He admitted that he was a little worried about his financial condition. During the next few days he said repeatedly that he was afraid that he stood to lose quite a little money, that he should not have gone into a certain deal. He reiterated this phase quite frequently, "I should not have gone into this." According to the father's statement there was no reason for the son to worry about his finances. The latter, however, though cheerful at times, continued to repeat that he had got in too deep and that he felt he should not have done it. This patient committed suicide by cutting his throat, without ever having expressed any suicidal ideas.

Another patient seen in consultation was a newspaper man who was supposed to be suffering from the effects of overwork incident to a strenuous advertising campaign. He expressed some dissatisfaction with his work, although his employers were well pleased with the results he had achieved. As he was somewhat depressed the attending physician and the relatives were advised to place him in a sanitarium. This advice was disregarded as being too radical and it was decided to treat the patient at home. Within a week he committed suicide by hanging.

I have come to look with grave apprehension on any patient who expresses the idea that in some way he is dissatisfied with himself, wishes he had done things in a little different way, or thinks he might have made a mistake. If a patient of this kind is even mildly depressed I believe the possibility of manic-depressive depression should be seriously considered, as the ideas expressed in this way represent the lightest form of the self-accusatory delusion and mean that the patient is a potential suicide. It should be remembered, however, that a patient may be suicidal without expressing any delusional idea at any time.

Depressive patients do not always show the three cardinal symptoms, psychomotor retardation, depression, and retardation of thought. A mixed form known as agitated depression is quite common. Here the patient shows motor excitement rather than inhibition. A patient who is now passing through a profound depression describes this condition in the following manner. He says, "I am not weak. I could work but I have no ambition. It seems that I don't care to work any more, so that I have to stop what I am doing after a short time. I have this terrible pressure in my head and all I can do is walk, walk, walk. I have walked this morning more than four miles. That makes me so terribly depressed, that I would not want to live if I could not get better." If you will compare with this clear-cut picture of a depression of the mixed type, the notes obtained from the following case, you will see that the manic-depressive picture is at times very hazy. This patient, a woman forty-three years of age, had a nervous breakdown twenty years ago after losing a child. She had spells of being afraid to be alone lest she do something to herself. She would then seek the presence of her husband, a farmer, and the attacks would pass. About seven years ago she had another spell of sickness, when she again felt that she needed company but was all right when with her husband or the children. She now feels weak and run down. She is supposed to have had an attack of intestinal influenza last spring, which marked the beginning of her present illness. Her home life is happy. She has no worries except about herself. She is afraid she might lose her memory and although always a lover of music, she has lately no feeling for it. She gets so nervous at times that she has to keep constantly active so as not to think. When urged to talk about herself more freely, she admits that she constantly has to fight ideas of suicide, that she has to seek the society of her family because she feels safer with them. She has a marked feeling of inadequacy, and has lost interest, but instead of being retarded in her motor activity she has some of the same pressure of activity as the man who has to walk. So much for the depressed forms of manic-depressive psychosis.

The excited forms in their lightest degree are less frequent and as a rule more readily recognized than the depressions. Their importance lies in the fact that the patient's conduct is often judged as due to moral lapse rather than to disease, because the psychosis back of the situation is overlooked.

The cardinal symptoms, elation, over-activity, and flight of ideas are present, but they are not greatly developed. The activity of the patient's mind is often increased, indeed he may appear brighter and quicker-minded than usual, but he does not exhibit such extreme disorder of conduct as to bring him into conflict with his fellows. He is merely considered a live-wire, witty, aggressive,

a social success. Such persons are often possessed of a tireless energy and accomplish more than the average, but at times this normal mental disposition becomes increased and passes over into the pathologic, then these patients become interfering, irritable and quarrelsome, and they begin to have so many irons in the fire that their friends suspect something is wrong.

A certain number of them are represented by the periodical drinker, who will go on a spree time and again, with the regularity of clock-work, but during the interval is often a teetotaler. A great number of these cases have been studied by Menas Gregory in the psychopathic ward of Bellevue Hospital. They were brought to the hospital on account of their alcoholism after sprees that would last from a day to a few weeks. Some of these patients would be admitted a dozen times in a year. When sobered up they showed the typical symptoms of a manic attack. They were formerly considered cases of pathologic drunkenness or alcoholic psychosis.

Erotic excitement is generally present in these cases and often leads to sexual excesses or it may lead the patient into a hasty and ill-advised marriage from which he would only too gladly extricate himself after the attack has run its course. Young women who become erotic in these excited phases often expose themselves in an entirely shameless manner to sexual contacts.

The fundamental etiology of the manic-depressive psychosis is only partially understood. In the great majority of cases it occurs only in individuals of the disposition already described. That this disposition is grounded in the entire make-up of the patient, physical as well as mental, has been shown by Kretschmer in his description of a certain physical habitus which he terms pyknic and which he found in 72 out of 85 of his manic-depressive patients. In about half of the cases the exciting cause is apparently some outward event, such as the loss of dear ones, domestic trouble, financial reverses, overwork with worry, disappointments, and so forth. In the rest, the attacks are apparently founded on a purely hereditary or constitutional basis.

The prognosis in both the excited and depressed types has been studied by MacDonald of Danvers State Hospital. In general, he states, the outcome is more favorable in the depressions than in the excitements. The intervals are apt to be longer and the possibility of non-recurrence greater. Both manic and depressive attacks first occurring after forty have a tendency to a lengthening of the attack and shortening of the interval between the attacks. Recovery or marked improvement is more common in attacks of one to six months' duration. A few patients pass into a chronic state which may persist for an indefinite number of years. It is generally accepted that cases having an exogenous causal factor have a much better prognosis than those that seem to be the result of purely hereditary or constitutional conditions. The patient's personality is an important factor; if he has wide interests and outlets for his activity the prognosis is better.

With regard to treatment, there are some general principles to be observed. Most of these patients are best treated in a hospital but not necessarily in a mental hospital. In the excited cases the consent of the patient's relatives is easily obtained because they are afraid that through his irresponsible activity the patient may get himself into serious trouble. With the depressed patient we will sometimes have difficulty in making the friends see that something more than a change of air is necessary. They think that he needs stirring up, that he should be taken on a trip and so forth. No greater mistake could be made. The patient should be kept in bed at first, and no special demand of any kind made upon him, but as he gets better he should be induced to regain satisfying interests, to occupy himself and gradually to return to his normal activities. While the patient is undergoing bed treatment a thorough study of his physical condition should be made. Local infection, gastro-intestinal stasis, and endocrine imbalance must be sought, and as far as possible corrected. The danger of suicide must be guarded against in the mildest cases of depression.

Sleeplessness can be combatted in part by hygienic means and hydrotherapy. The patient's environment must be comfortable and his diet carefully regulated. A warm bath of 98 to 100 degrees for twenty or thirty minutes at night, followed by a glass of warm milk or some other nourishing food, is helpful. Hypnotics will have to be used to a certain extent. The ideal hypnotic does not exist. Paraldehyd is safe and quick in action in doses of one to three drams, but has the objection of an abominable taste. Veronal and trional in doses of ten to fifteen grains act well, and bromide and chloral, thirty grains of the former and fifteen of the latter, are great favorites of mine. Occasionally hyoscin, hydrobromate 1/100 of a grain with morphine, one-sixth to one-fourth grain, will be required.

Occupational therapy should be tried during convalescence. To the depressed patient it will give a feeling of success and help to overcome the feeling of inadequacy, while it will furnish an outlet to the excited patient. During this stage, also, psychotherapy comes into its own. One should attempt to give the patient an understanding of the

conditions in himself which have brought about his breakdown and so enable him to prevent a recurrence. This will be especially helpful in those cases where the attack has occurred as a reaction to outside factors. A careful study of his life's history with a sympathetic understanding of his characteristics will often be of greatest help to the patient.

Sodium amytal, which has been introduced recently, has already had an extensive trial. It is given either in the form of the grain capsules, or the drug may be given intravenously or by rectum in doses up to fifteen grains. At times an attack of manic-depressive psychosis can be greatly shortened if the patient is kept almost constantly asleep with this drug for a limited time. Sodium amytal appears to be less liable than veronal or luminal to produce confusional states when used in large doses.

THE USE OF THE DICK METHODS IN THE CONTROL OF A SCARLET FEVER EPIDEMIC IN WATERLOO, IOWA*

Paul S. Rhoads, M.D., Chicago

Waterloo has a population of about 40,000. For many years prior to 1928 it was comparatively free from scarlet fever. During the last half of September, 1928, coincident with the opening of the public schools, nine cases of scarlet fever were reported among the school children and one in a pre-school child. In October, thirty-two cases (including ten adults) were reported, and the figure for November was 118 cases. The epidemic continued, until by March 10, 1929, a total of 803 cases had been reported.

At this time, approximately seven months after the start of the outbreak, the late Dr. Henry Albert, Commissioner of Health for Iowa, asked the Scarlet Fever Committee to do what it could to stop the spread of the disease. Dr. Gladys H. Dick met with the school authorities and the local medical society, and plans were made to offer Dick tests for susceptibility and active immunization against scarlet fever free of charge to all school children.

A scarlet fever epidemic may be controlled most quickly by quarantining all carriers of hemolytic streptococci and administering scarlet fever antitoxin to those who are shown by Dick tests, cultures and physical findings, to be in imminent danger of coming down with the disease. However, culturing did not seem to be feasible at this time because it could be assumed fairly that seven months from the onset of the epidemic a large percentage of the adult population would be carriers. Since all of these persons could not be quarantined successfully, it seemed best not to attempt to segregate the carriers among the school children. Accordingly, the school authorities sent printed blanks to the parents on which the skin test, to be followed by five doses of scarlet fever toxin if the children were found susceptible, could be either requested or declined.

From a total school enrollment of 5,513 there were 2,041 with signed requests who received the Dick test. Eighty-four of these were absent next day so that the reaction was not observed. Of the remaining 1,957, 50.54 per cent were found susceptible, and 783 pupils began the immunizing treatments, 206 refusing the first dose. The Dick method of immunization was used the doses being 500, 2,000, 8,000, 25,000 and 80,000 skin test doses of scarlet fever toxin respectively, given at weekly intervals. Four hundred and ninety-two children finished the course of five doses. Retests were made on those who finished the series two weeks after the final dose, the retest being made with one skin test dose on the right arm and two skin test doses on the left. Those found susceptible to the retest—even if negative to the one but positive to two—were given a sixth immunizing injection of 80,000 skin test doses. Of the 444 persons who appeared for retest, 92.3 per cent were found immune. The others showed a greatly modified degree of susceptibility but were given the sixth immunizing treatment.

As recorded above, approximately half of the children tested were found susceptible on the original tests. Assuming that the expectancy of susceptibility in the entire school population was one-half, there were about 2,756 East Side school children in danger of contracting scarlet fever. Obviously immunization of 492 of these (18 per cent) would not go far toward checking the epidemic. However, it is possible to draw some conclusions as to the efficacy of the immunizing treatments in this group.

From March 11, 1929 to May 14, 1929, the period during which the immunizing work was carried on, there were 67 cases of scarlet fever among the East Side school children. Of these 53 were neither tested nor immunized by the Scarlet Fever Committee. Eleven others had been tested and found susceptible, but their parents had then refused any immunizing doses. One case was in a child who had received only one dose; two were in children who had received only two doses. From May 14, 1929 (when the immunization work was completed) to March 19, 1930,

*From the Scarlet Fever Committee and the John McCormick Institute for Infectious Diseases. (For the follow-up figures mentioned in the article the author is indebted to Miss Joy Harmon, R.N., public health nurse of the East Waterloo schools.)

35 more cases of scarlet fever were reported among the East Waterloo children. Of these 31 were in children who had not received the Dick test. Four were among children who had been tested and found susceptible but whose parents had refused further immunizing treatments after the first dose. There were no cases of scarlet fever among those who completed the series of five injections or those found immune by the original Dick tests. It is of particular interest that eleven cases developed in the comparatively small group of 206 children whose parents refused to let them have even the first immunizing dose after they were found susceptible. At this rate at least twenty-six cases may fairly be assumed to have been prevented during the short period of two months in the series of 492 children who completed their immunizations. From a large experience with the dosage used it can be safely predicted that these children will be protected for a period of at least several years.

CONCLUSION

The efficacy of the five-dose method of immunization with scarlet fever toxin was demonstrated by the fact that during the period of the immunizing program and the succeeding ten months in East Waterloo, 102 school children who were not immunized contracted scarlet fever, while no cases occurred in those immunized or those found insusceptible by the original Dick tests. Eighty-four of these cases of scarlet fever were in children not tested for susceptibility. Eighteen were among children found susceptible by the Dick test but not immunized.

TABLE 1

Summary of the Immunization Work Accomplished

Number of Dick tests performed	1957
Number of positive tests (indicating susceptibility)	989 (50.54%)
Number who completed the series of five immunizing doses	492
Number who completed the series of five doses and were retested	444
Number found negative on the retest	411 (92.3%)

TABLE 2

Summary of the Cases of Scarlet Fever Reported Among the East Waterloo School Children During the Immunizing Campaign and the Succeeding Ten Months (March 11, 1929 to March 19, 1930)

Cases among children not tested or immunized	84
Cases among children found susceptible but not immunized	18
Total cases of scarlet fever reported	102
Cases of scarlet fever among children who completed the series of immunizing doses (492 in this group)	0
Cases of scarlet fever among children found insusceptible on the original Dick test (968 in this group)	0

ANTERIOR POLIOMYELITIS

A Review of the Literature, Stressing Especially the Preparalytic Diagnosis and Serum Therapy

HOWARD J. HARTMAN, M.D., Waterloo

Osler defines acute poliomyelitis as an acute infection characterized anatomically by widespread lesions of the nervous system, with special localization in many of the cases in the anterior horn cells of the gray matter in the spinal cord; in other words, it might be termed a polio-myelo-encephalo-meningitis.

There are various forms of the disease manifesting themselves in even a single epidemic; however, I will confine myself to the most common type.

The onset of the disease is usually quite sudden, but may be gradual. There may be a stage of general invasion lasting from two to four days, during which the patient may exhibit symptoms of coryza, tonsillitis or gastro-intestinal disturbance with some vomiting and a temperature rarely higher than 100°F. There may be a pause of a day or two between this initial stage and the second, meningeal stage, in which the patient may be thought to have completely recovered from a passing and trivial malady. During this preparalytic, meningeal stage, the temperature rises again, possibly to 102°F. and the patient exhibits headache, pain in the limbs and back, and fretfulness. A very important diagnostic sign should be looked for, called the "spinal sign," in which the spine is nearly always resistant to passive flexion. It is best described as a voluntary disinclination to flex the spine anteriorly, because it hurts. When placed in a sitting position on a hard surface, the patient assumes the posture of a tripod, conveying part of the weight of the body through the arms. The picture is really that of a mild meningitis with headache, tremor, and stiff neck and back, constituting an outstanding syndrome. There is frequently a retention of urine, the patient going twelve to twenty-four hours without urination. However, Ayers says that catheterization never is necessary. Constipation is almost uniformly present during this stage, although there may be diarrhea.

Occasionally, these two stages may be so slight

as to escape notice and the patient passes straight into the third stage of paralysis.

According to Ayers, this clinical picture is almost diagnostic, and if at all suggestive, should be confirmed by a lumbar puncture. This is of value only if done before paralysis sets in, since it is only during the preparalytic stages that there is an increase in cell count or any alteration in the spinal fluid.

Friedman made a study of 240 spinal fluids at the Boston City Hospital. His conclusions were as follows: globulin distinctly positive and sugar averaging about 65 mg. per 100 c.c., while that of tuberculous meningitis is rarely over 35 mg. The pressure was always slightly increased, and the cell count averaged about 50 per cm., consisting mainly of lymphocytes. Others, in similar series, give the same results except for the cell count varying between 50 and 300, averaging about 200 per cm. Spinal fluid examinations made in three of our own cases this fall showed counts of 76, 65 and 30 respectively, the first two being in the preparalytic stage and the latter shortly after paralysis had set in, in one leg.

It is urged by all that fluid examinations be made immediately following puncture and the authors emphasize very strongly that poliomyelitis can be and should be diagnosed in this stage, before the ensuing paralysis makes it clear to all.

During the past three years several series of cases have been reported in which patients in the preparalytic stage of acute poliomyelitis have been treated by means of human immune serum, known as "convalescent serum." Largest reports are from Ayer of Syracuse, and Aycock and Luther of Boston. In Victoria, Austria, 330 cases have occurred since 1928. Jean McNamara has summarized this epidemic.

The serum was limited to patients in the preparalytic stage, to those in the first twenty-four hours after the onset of paralysis, with persistent fever, and to those with the spreading type. The importance of the recognition of preparalytic poliomyelitis was recognized as an urgent problem, where time matters as much as in acute osteomyelitis or in a case of intussusception. In many points the aim of treatment in poliomyelitis and intussusception is the same, "to correct the condition before death of tissue occurs."

The convalescent serum was usually given intraspinally, preferably by means of gravity. Amoss and Chesney gave the intraspinal injection at the onset, followed by a large intravenous injection and perhaps by a repeated intravenous injection on the following day. The dose varied, but was rarely less than 60 c.c. No reaction was observed in this series, although it was always looked for closely.

Of the forty-two preparalytic patients of this series; one died six hours after serum was given; two became severely paralyzed; sixteen others had demonstrable weakness for some weeks which later cleared entirely; twenty-three escaped with no paralysis. The sixteen in whom paresis was demonstrated, having the same clinical picture and the same spinal fluid findings as the others, served to convince even sceptics, who saw them, that they were dealing with the one condition in all the cases.

Those who received serum within twenty-four hours after paralysis had set in comprised nineteen patients; sixteen had no further paralysis, and eleven of these made a complete recovery.

Harold L. Moss gave the following conclusions on 326 cases treated by himself and others with convalescent serum:

1. The mortality among the bulbar cases was 70 per cent in the untreated, and only 10 per cent in the treated group.

2. The rate of recovery of paralysis in the treated group was strikingly more favorable than among the untreated.

A report of 161 cases in the Manitoba epidemic of 1928 gives the following results, the intramuscular administration being used almost exclusively. Standard doses of 25 c.c. were used in the preparalytic stage and subsequent doses were given if the disease was found to be progressive.

Of the 161 cases, seventy-four received serum in the preparalytic stage; thirty-three after paralysis had set in, and fifty-four no serum at all. Of the first group, 93 per cent made complete recovery. Of the second group, 22 per cent made complete recovery, 33 per cent died, and 45 per cent became paralyzed. Of the third group, who received no serum, 26 per cent made complete recovery; 11 per cent died, and the remainder remained paralyzed.

According to Rosenow and Nickel, good results have been obtained with poliomyelitis and streptococcus serum prepared by immunizing horses with a dead and then a living pleomorphic streptococcus, isolated from patients with poliomyelitis. The injections of the serum were made intravenously or intramuscularly. A return of fever and high pulse rate twenty-four hours after an initial drop was considered indication for the need of more serum. No more than three or four injections were given.

Their series included 109 cases; thirty-one had no paralysis at the time of the first injection; twenty-five had slight paralysis; and fifty-three moderate or marked paralysis. Of the first group,

3.3 per cent died; of the second group, 4 per cent, and of the third group, 17 per cent. Spinal punctures were made in each case. Cell counts averaged 158 in the first two groups, and 301 in the third group, in which there was considerable paralysis, and 522 in the fatal cases. Thus the cell count is a good indication as to the severity of the disease. In general, the sooner the serum was given, the more striking were the results, and in none were there any harmful effects.

A further study of 113 patients treated with Rosenow's serum and with 278 controls, showed good effects from the use of the serum, and was inversely proportioned to the degree of involvement at the time of the first serum treatment. The mortality rate was consistently much lower in the treated than in the control group. The incidence of apparently early beneficial results was greatest in the group receiving serum before the onset of paralysis, and apparent benefit was derived by 56 per cent with marked paralysis at the time of serum treatment.

Last fall Dr. Frank T. Hartman and I saw and treated five patients with diagnoses of poliomyelitis. Two in the preparalytic stage were confirmed by spinal puncture; one in the early paralytic stage was also confirmed by spinal puncture; and two in the paralytic stage proper. All five were given Rosenow's serum intramuscularly, and the one with beginning paralysis was given one does of 20 c.c. convalescent serum intraspinally. The first two mentioned recovered with no paralysis and the other three recovered with *no further* paralysis. Immediately following the injection of the serum in each case the patient did seem to improve clinically.

CONCLUSION

I firmly believe from this review of the literature, that the preparalytic stage of poliomyelitis presents a distinct clinical entity; that diagnosis can be and should be made early; that human convalescent serum administered intraspinally or intramuscularly in this period, is of value in preventing paralytic sequelae; and that the earlier it is given, the more successful the result. The intramuscular route of administration is simple, safe, and sufficiently efficacious to justify its use during an epidemic.

If the convalescent serum is given when paralysis is stationary, it is of no value.

As for Rosenow's serum, I am not so certain, since I was able to review only one paper on it, and it was written by Dr. Rosenow himself and Dr. Allen Nickel. He claims splendid results, and from our own limited number of cases this past fall, we are prone to believe that it is of value. In case the convalescent serum cannot be obtained immediately, I certainly would advise giving the Rosenow serum intramuscularly, since it can do no harm and there is a strong possibility that it does considerable good. At least it gives the patient the benefit of the doubt.

NON-INHALATION ANESTHESIA

J. DEWEY BISGARD, M.D., Harlan

Although inhalation anesthesia (especially ether) has been one of the great benefactions of mankind, and has made possible the tremendous development of surgery, its disadvantages and associated systemic hazards have long been recognized, particularly in poor risk cases. For this reason the less irritating and less toxic gases, such as nitrous-oxide and ethylene, the relatively non-toxic procain group, and more recently, sodium amytal (the sodium salt of iso-amyl-ethyl-barbituric acid) and tribromethyl alcohol (avertin or E-107), are rapidly supplanting ether anesthesia.

Spinal anesthesia was successfully used by Matas as early as 1899, but it remained for the introduction of ephedrin sulphate to prevent vascular collapse, and the work of Pitkin in 1928, to accord it recognition as a safe and superior form of anesthesia.

Two years ago I began using spinal anesthesia for all surgery below the clavicles. At first spinocain was used, following the technic outlined by Pitkin, but more recently I have used procain crystals dissolved in the spinal fluid. The dosage has varied from 100 to 300 milligrams mixed with 1 to 8 cubic centimeters of spinal fluid, depending upon the patient equation and the desired level of anesthesia. In case of failure to secure satisfactory anesthesia within ten minutes after the initial subdural injection, I make a smaller supplementary instillation. The blood pressure has been maintained within normal limits by the prepuncture use of ephedrin sulphate 0.05 to 0.1 gram subcutaneously, and such subsequent administration as is indicated by frequent blood pressure observations. In cases of hypertension the administration of ephedrin sulphate has been withheld until anesthesia begins to manifest itself in the lower extremities, or until the appearance of the slightest initial drop in blood pressure. Before inducing spinal anesthesia in cases of hypotension, the vasomotor response to ephedrin sulphate is tested and a satisfactory elevation of pressure obtained.

The remarkable facilitation of intra-abdominal manipulation due to the complete relaxation of the striated muscles, the non-interference with peristalsis, and the apparent minimal disturbance of general metabolic processes leaves little to be de-

sired in an anesthetic, except the accomplishment of a temporary psychic dissociation. To gain this end I began administering amytal orally in doses of 9 to 24 grains three hours before operation, but the prolonged stupor made this method somewhat objectionable.

In February, 1929, Zerfas and McCallum introduced sodium amytal for intravenous use by a publication of their results of successful induction of general surgical anesthesia in 300 cases. Following their technic, I first used sodium amytal alone in intravenous doses varying from 1.0 to 1.8 grams, but with repeated failure to secure sufficient relaxation for abdominal surgery, I found it necessary to supplement other forms of anesthesia, and finally evolved what I consider a most satisfactory combination of anesthetics from the standpoint of both the patient and the surgeon.

On the night before operation the patient receives 0.18 gram of amytal orally; three hours before operation, 0.55 to 0.90 gram of sodium amytal by mouth; and one hour pre-operatively 0.01 to 0.015 gram of morphin sulphate subcutaneously. This medication usually produces a marked stupor, so that the patient has not the least apprehension or anxiety regarding the subsequent therapeusis, a status mentis especially desirable in cases of hyperthyroidism. Immediately preceding operation (usually in the patient's room) a 10 per cent solution of sodium amytal is administered intravenously in doses varying according to the age and weight of the patient, from 0.50 to 1.30 gram. Before the injection is completed the patient becomes profoundly unconscious. As a working rule I administer double the quantity of sodium amytal necessary barely to induce sleep. The patient is then removed to the operating room, and spinal anesthesia instituted as outlined above.

This combination produces ideal muscular relaxation and a complete oblivion of the operating room, the operation, and the surroundings for six to twenty-four hours after operation, and often an amnesia dating from the night before operation. There is often no postoperative vomiting, and an absence of postoperative pain and discomfort for four to twenty-four hours.

For surgical procedures not demanding muscular relaxation I often supplement the above described sodium amytal technic with infiltration and regional nerve block anesthesia. Likewise, in dispensing with inhalation appliances, and in the alleviation of the gruelling experience of certain operations about the mouth, nose and throat this form of anesthesia is particularly useful.

Of two hundred and eight cases operated upon under spinal anesthesia there were no complications directly traceable to the anesthetic used, with the exception of three cases of headache of short duration, and two cases of persistent soreness at the site of the lumbar puncture.

Thirty-six cases receiving combined intravenous sodium amytal and spinal anesthesia were studied with particular reference to evidence of toxicity or organic functional disturbance resulting from the use of these drugs. The average urinary output during the first ten hours was 322 cubic centimeters; during the first twenty-four hours, 710 cubic centimeters. Urinalyses showed no albumin, casts, or red blood cells, and in only one instance a trace of sugar. The blood picture in all cases was unaltered; and the blood chemistry in the ten cases studied showed no appreciable increase in creatinin or urea, and an elevation of from 10 to 36 milligrams of sugar over the respective preoperative specimens. None of these cases received glucose postoperatively.

In a comparative reference to the reported complications and disadvantages of the use of sodium amytal, I may enumerate the following observations:

1. Passive congestion and pulmonary edema have resulted from prolonged quietude and shallow respiration during the long postoperative hypnotic state. There have been no instances in my series. It may be noted here that the administration of caffein-sodium-benzoate after operation will appreciably shorten this state.

2. Suffocation from tongue-swallowing has been reported, but is a complication which can be avoided by constant trained attendance until semi-consciousness returns.

3. An increased frequency of postoperative catheterization after sodium amytal anesthesia seems to be a constant observation. Obviously this would lead to a slightly higher incidence of cystitis and pyelitis.

4. Restlessness to a marked degree with regaining consciousness was observed in one case of this series.

5. The incidence of nausea and vomiting is greatly reduced, occurring in only three of our cases; one with lysis of extensive adhesions for acute intestinal obstruction; another a cholecystectomy and choledochostomy for stone in the common duct; and the third, a simple appendectomy for acute appendicitis with considerable pre-operative vomiting.

I have never used sodium amytal in conjunction with gas, and in only one instance with ether anesthesia.

My experience has led me to concur with other observers in the opinion that sodium amytal is a

safe, rapidly acting, powerful hypnotic, and finds its greatest usefulness as an adjunct to other forms of anesthesia. I feel that this more detailed and complex combination of non-inhalation anesthesia, as outlined above, is justified by the praise which it has received from its recipients, and the greater margin of safety it affords.

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DIGITALIS INTOXICATION

JOHN W. THORNTON, M.D., Lansing

Probably no more appropriate introduction to this subject could be found than the following comment of William Withering:[1]

"It is much easier to write upon a disease than a remedy. The former is in the hands of nature, and a faithful observer, with an eye of tolerable judgment, cannot fail to delineate a likeness. The latter will ever be subject to the whims, the inaccuracies and the blunders of mankind."

Discussion of digitalis intoxication involves most intimately the inaccuracies and blunders of mankind, for this drug, which has been called the backbone of cardiac therapy, requires no defense of its established place in medicine. Like most drugs of value, it may be toxic in sufficient dosage and care is required in its administration, especially since there has been some tendency to use it indiscriminately in all heart disorders and to give large doses even in conditions where its effects are negligible. The results obtained are so generally favorable that its failures and occasionally harmful action may be misinterpreted. These variations in effect have been attributed by Luten[2] to two factors: insufficient differentiation of cardiac patients and imperfect understanding of the action of the drug and the mechanism of its action.

In 1785, Withering published his thesis entitled, "An Account of the Foxglove and Some of Its Medical Uses."[1] Later studies in laboratory and clinic have explained many phases of its action and determined more definitely its proper sphere in medicine. Yet the original observations of Withering can still be referred to with benefit and modern usage has largely returned to his teachings. While his treatise dealt chiefly with its use as a diuretic in dropsy, he concluded with the following statement:

"It has a power over the motion of the heart, to a degree yet unobserved in any other medicine, and . . . this power may be converted to salutary ends."

This prediction has been abundantly verified by its present position in the treatment of cardiac failure. The use of larger and more effective doses of digitalis is usually dated from the work of Cushny[3] and Eggleston[4], yet Withering's writings show that he was accustomed to large doses and was familiar with the toxic effects. One chapter begins with this statement:

"The foxglove, when given in very large and quickly repeated doses, occasions sickness, vomiting, purging, giddiness, confused vision, objects appearing green or yellow, increased secretion of urine, with frequent motions to part with it, and sometimes inability to retain it, slow pulse, even as low as 35 in a minute, cold sweats, convulsions, syncope and death."

Here are mentioned many of the common toxic symptoms, as well as several of the more unusual types. As to dosage, Withering's practice was evidently to "continue the medicine until the urine flows, or sickness or purging takes place," later modifying his advice as follows: "Let the medicine be given until it either acts on the kidneys, the stomach, the pulse or the bowels; let it be stopped upon the first appearance of any of these effects." In other words he used sufficient digitalis to secure the desired therapeutic or minor toxic action.

Eggleston's publication in 1915[4] brought out two important ideas: first, that the amount of digitalis necessary in any given case could be calculated in advance, and second, that one could obtain prompt effects by using larger doses by mouth. This work has greatly increased the effective use of digitalis, for many more patients have suffered from too little than from too much. The danger of overdosage is present, however, for susceptibility varies and toxic symptoms may occur with less than the calculated dose. Larger doses have therefore given more opportunity for observing these symptoms and Eggleston himself says the use of large doses "is not a safe procedure unless the patient can be under nearly constant observation and unless the effects of treatment can be graphically recorded at frequent intervals." Hence there is now much tendency to desert Eggleston's more or less arbitrary rule and return more closely to Withering's principle that dosage is adequate when the desired results are obtained.

Occasionally in susceptible persons one or more toxic symptoms may appear even before the desired results. No one symptom more than another suggests the maximum safe dosage, for there is no constancy as to their order of onset or predominance in the clinical picture. Some discussions of digitalis therapy mention only a few of the more common symptoms such as headache, nausea, vomiting and bradycardia, but not infrequently severe toxic symptoms may arise before any of these are noted. Following the classification given by H. L. Smith[5] of the Mayo Clinic these toxic phenomena fall in three groups, as follows:

1. Common group—Headache, anorexia, nausea, vomiting, giddiness, bradycardia, sinus or phasic arrythmias, and premature beats.

2. Less common—Abdominal pain, diarrhea, blurring of vision, coupled rhythm, complete or incomplete heart block.

3. Relatively rare—Colored vision, urinary suppression, mental depression, delirium, convulsions and coma.

Many cases have been reported in which the earliest complaint concerned one of the rare symptoms, for example the visual or mental disturbances. My interest in the subject was aroused by a case of this kind in August of 1925. An elderly lady presenting a marked auricular fibrillation was given digitalis in moderately large doses. Within a few days, before nausea or any marked slowing of the pulse was noted, she developed marked visual symptoms, with dimness or blurring and flashes as of fire, especially noticeable when looking at a source of light. This was very distressing and required a darkened room. Ophthalmoscopic examination showed no explanation, but nausea soon appeared and digitalis was withdrawn, with the result that the visual disorder improved within three or four days.

A few weeks later Sprague, White and Kellogg[6] presented an extensive review of the visual disturbances due to digitalis, some noted after only small amounts of the drug. Flickering before the eyes has been one of the earliest symptoms, or there may be other subjective light sensations, such as flashes of light or moving sparks. Oscillation of all objects in the visual field and also diplopia have been described. Dimness or blurring of vision may appear very early and in severe poisoning, temporary or even permanent blindness may occur. Disturbances of color sensation are among the most striking effects, especially the green or yellow vision noted by Withering, this effect often being increased upon going out in the sun or even under artificial light. Ophthalmoscopic examination has been negative. The best explanation of the origin of these disorders has attributed them to functional cerebral alteration, as they are often associated with headache and mental disturbances. The exact element in digitalis responsible for these phenomena has not been determined. In some cases the symptoms were noted before any nausea or changes in the cardiac rate or rhythm appeared and they have been seen with doses no greater than the theoretical or calculated amount.

Nervous and mental symptoms, including headache, dizziness, hallucinations and especially delirium are prone to occur without the other manifestations of poisoning. Several cases of undoubted digitalis delirium or overexcitation have been reported from only moderate dosage. Though the condition is relatively rare and usually clears up within five or six days after withdrawal of the drug, it is important, since digitalis may be continued with the idea that the delirium is due to the cardiac condition, such cardiogenic psychoses being fairly common as can be seen from the following classification by Riesman:

1. Accidental psychoses occurring in patients of psychogenic makeup.

2. Those due to concomitant disease of the kidney—uremia.

3. Those due to acidosis.

4. Those due to various drugs and poisons, notably alcohol, digitalis, etc.

5. Those due to liver or intestinal toxemia.

6. Those due to direct disturbance of the cerebral circulation.

Hamburger[7] has found these psychoses more likely to occur in those over forty-five years of age, with elevated blood pressure, arterial changes, especially in the brain, and advanced heart failure; and warns that all medication should be given cautiously in such patients. Willius,[8] too, has found digitalis delirium largely in older people and states that he cannot recall seeing it in cases of valvular heart disease.

Though digitalis must be considered as a possible cause of any mental disturbance where it is being used over a long period and its withdrawal is justified at any sign of increased excitability, yet the diagnosis must be made with reserve, for decompensation with the associated changes in the cerebral circulation is a more frequent cause of delirium than is digitalis. Some even claim that the mental symptoms are due entirely to changes in the cerebral circulation as a result of the heart slowing. Carr[9] gives the following requirements for the diagnosis of digitalis delirium:

1. Use of digitalis, either in large doses or over a long time.

2. Absence of any other probable cause for delirium.

3. Presence of other symptoms of digitalis intoxication.

4. Onset of the delirium as the decompensation recedes.

5. Rapid clearing of the mind after digitalis is withdrawn.

Changes in the cardiac mechanism and rhythm occur frequently from digitalis and are due to three factors, one or another predominating in different persons according to individual susceptibility, which may depend upon the degree of myocardial exhaustion and a variable rate of elimination in congestive heart failure. These factors are:

1. Increased irritability of the heart muscle, even to the point of ectopic impulse formation.

2. Diminished conductivity, especially of the A-V bundle.

3. Stimulation of the vagus inhibitory mechanism.

Some changes in the mechanism and rhythm are readily recognized and may even be part of the normal therapeutic response to digitalis. Others occur only in definitely toxic action and their character is determined with certainty only by the aid of the polygraph or electrocardiograph. Associated with these changes there may be palpitation and a feeling of oppression about the heart.

Bradycardia occurs as an exaggeration of the normal ventricular slowing. The heart rate constitutes one of the best guides to effective digitalis action, and a rate falling below 55 to 60 per minute is usually a warning of early intoxication. In most cases of heart failure the rate is increased and digitalis usually slows this rate, unless due to a paroxysmal tachycardia, paroxysmal fibrillation or to fever. With normal rhythm this action is rarely marked except in persons with edema, in those with rapid hypodynamic hearts, or in children. Where there is already a normal sinus rhythm, slowing is caused less by diminished conductivity than by vagus stimulation and direct improvement of myocardial tone, due to better coronary circulation. In auricular fibrillation, where slowing is much more spectacular, this effect, though due in part to the same factors, is brought about largely by diminished A-V conduction, with elimination of many useless auricular stimuli and substitution of an idioventricular rate and rhythm, which is typically much slower than a normal sinus rate.

Various arrhythmias occur in more or less definite order according to the increasing intensity of the toxemia.

Sinus or phasic arrhythmias may occur early as a result of vagus stimulation and alterations in the vagal tone. They manifest themselves as periodic waves of slowing of the whole heart, a waxing and waning of the pulse rate.

Extrasystoles or premature contractions of ventricular origin are among the earliest signs of digitalization, being due to increased muscular irritability. It must be remembered, however, that premature beats often occur in the failing heart of organic disease, such as myocardial, degeneration, aortic and mitral disease, and here it is possible that digitalis will cause their disappearance. Extrasystoles are usually easily recognized by auscultation, a weak or premature beat being followed by a compensatory pause, with the heart rate rarely over 120. Exercise usually corrects the arrhythmia.

Auricular fibrillation has occurred as a result of digitalis administration in hearts previously showing normal rhythm. In fibrillation there is loss of the rhythmic coordinated contraction of the auricle with substitution of independent contractile impulses originating at numerous points. This produces an absolute arrhythmia, showing constant irregularity without intervening periods of regular rhythm and the rate usually exceeds 120. Multiple extrasystoles may be confused with it occasionally, but they are usually obliterated by exercise, while fibrillation is aggravated.

Heart block, partial or complete, is due to diminished conductivity, usually of the A-V bundle; other forms, such as sino-auricular and arborization block, are rare and require the electrocardiograph for identification. In A-V bundle block there is first a prolonged interval between auricular and ventricular systoles, then omission of some ventricular beats, and in the complete type, continuous disassociation of the auricle and ventricle with an idioventricular rate which may vary from day to day but is usually below 40 per minute. Incomplete block may be suspected with rates of 40 to 50, while rates below 35 are usually due to complete block; this, of course, refers to the apex rate and not the pulse, since a large pulse deficit might be confused with block. Digitalis block is often above the A-V node with the ventricular contraction initiated at this node, where the rate of impulse formation is usually 40 to 60 a minute. Sudden halving of the ventricular rate is always suggestive of 2:1 block, in which exercise may double the rate and rest again halve it, the auricular impulses in exercise being more powerful and able to force themselves through the bundle. According to Lewis, the severe grades of block from digitalis are most likely to occur in young persons with rheumatic hearts. He also says that the rate must fall below 20 be-

fore the rate alone causes much disturbance of the circulation. In discussing digitalis block Reid[10] says that the great fear of block is based on a misconception of digitalis therapy, for some impairment of conduction is often desired, for example the production of therapeutic block sufficient to slow the ventricular rate to normal being an established principle in such conditions as auricular fibrillation. He has found no record of death due solely to digitalis induced block. The fear of heart block is attributed to the fact that most cases of spontaneous block are associated with some serious form of heart disease, so they naturally have a low life expectancy. The occurrence of partial or, especially, complete block is usually considered an indication to stop digitalis; ordinarily this is true, and while the use of digitalis in such conditions is treading on dangerous ground, there are times when it is wise to convert a partial to a complete block. Even in spontaneous block this drug may be the only remedy to relieve the distressing symptoms of cardiac failure. In complete block, digitalis may cause an increase in the heart rate, which is a toxic manifestation and calls for immediate withdrawal.

Coupling or bigeminy is one of the most serious of the untoward actions on cardiac rhythm. Gold and Otto[11] discuss it at length and attribute it to a premature contraction arising after each normal ventricular beat. They consider premature contractions a lesser degree of the same effect; premature contractions usually appear first, become more common and finally develop a complete coupled rhythm. This may occur even with relatively small doses of digitalis or where it is given only a short time. It is found more frequently in rheumatic heart disease and is six times as common in cases of auricular fibrillation as in those with regular rhythm. In general the prognosis is poor in patients in whom it occurs, but the evidence at hand does not prove that susceptibility to bigeminy indicates a grave prognosis beyond that obtained from the functional capacity of the heart.

Pulsus bigeminus is rarely constant from day to day, thus differing from pulsus alternans which may also occur under the influence of large doses of digitalis. The latter can be detected by palpation of the pulse, showing an even spacing with an alternating weak and strong beat, that is an alternation of volume, and by auscultatory blood pressure, which shows even spacing with regular alternation of loud and feeble sounds and halving of the sounds near the upper level of the systolic pressure as the weaker sounds are cut off.

Paroxysmal ventricular tachycardia may occur when toxic action is continued, especially in older people with severe myocardial damage and coronary disease, and usually in the advanced stages of congestive heart failure with considerable enlargement of the heart. It may be associated with auricular fibrillation or flutter or with complete dissociation of the auricle and ventricle, and tachycardia of both chambers. This disorder is characterized by sudden paroxysms of rapid and regular succession of ectopic beats with a rate between 110 and 200 a minute; its duration may vary. It may be suspected when there is a rapid, regular rhythm with the rate over 150 and unaffected by position, rest or exercise; vagus pressure may terminate the attack, but otherwise will not slow the rate, thus differing from auricular flutter which also usually shows a regular ventricular rhythm with a rate about 150 (though the auricular rate may be 200 to 350), but as a rule shows marked temporary slowing and possible irregularity from vagal pressure. Accurate differentiation of these two conditions is important, even though it may require electrocardiography, for the rapid rate of flutter would be an indication for more digitalis, while ventricular tachycardia produced by digitalis is an urgent reason for stopping it, since continuation of the toxemia is likely to lead to ventricular fibrillation and death. For this reason Tasker Howard[12] advises that patients developing a rapid regular rhythm after digitalis administration should be studied with the electrocardiograph before proceeding further and Marvin[13] says that any significant increase in heart rate without an objective physiologic cause in a patient receiving digitalis, and any failure of digitalis to slow a fibrillating heart, should be regarded with suspicion and the drug withheld until the electrocardiograph is employed. The origin of ventricular tachycardia is related to ectopic impulses in the ventricle; digitalis often causes these up to the point of regular coupled rhythm and may cause paroxysmal tachycardia by originating a circulatory wave of excitation or circus movement which pursues a relatively fixed and constant path in the ventricle. There is some evidence that it is an early stage of ventricular fibrillation.

Nausea, vomiting and loss of appetite are so uniformly the early symptoms of digitalis intoxication that there is some tendency to believe the drug can be safely given until they appear. This is more likely to be true where it is used in small doses over a long period, but with large doses, as we have seen, other more serious symptoms may develop first. According to Pratt[14] "vomiting may be preceded by a day or two of complete anorexia which should be a sign for the immediate discontinuance of the drug, when it seems

evident that the anorexia is caused by the digitalis. It is an indication that the so-called physiologic limit has been reached and that nausea and vomiting will follow if more digitalis is given." Vomiting should be avoided if possible, though at times the desired therapeutic effects are not obtained until the dose is increased to an amount which also produces gastric symptoms. The nausea and other digestive tract disorders have been ascribed to direct irritation of the stomach by the drug, especially by its fatty components or by products of deterioration. Haag and Hatcher[15] have shown that such deterioration as occurs results solely in diminished activity and not in increased toxicity; and Hatcher and Eggleston[16] found the emetic action could not be removed by any form of purification. The more generally accepted explanation has attributed this effect to direct irritation or stimulation of the vomiting center in the medulla. However, Hatcher and Weiss[17] have shown that the digitalis bodies do not act directly on the center, but that the vomiting is a reflex act, induced by afferent impulses originating peripherally in the heart itself and transmitted either through the sympathetic or parasympathetic to the center. The duration of the emetic action and that of the cardiac action roughly correspond.

Decrease in the amount of urine, or even in extreme cases suppression, is a frequent and very definite sign of intoxication. This is due to a vasoconstriction of the renal vessels in contrast to the early diuresis from vasodilatation. Because of this change it is a wise practice to chart the fluid intake and output and at the first sign of reduced output to discontinue digitalis.

While it is true these various manifestations of intoxication may occur unexpectedly and with comparatively small doses, more often they are due to improper administration, either the giving of excessive amounts without sufficient observation of the results or its use in unsuitable cases where the usual results could not reasonably be expected, for the routine use of digitalis in every type of cardiac disorder is far from scientific therapy. The cardinal indication for digitalis is myocardial insufficiency, in which it is used to secure more efficient heart function and freedom from the distressing symptoms due to insufficient heart output. Mackenzie[18] has emphasized its value mainly in heart failure associated with arrhythmias of the auricular fibrillation or flutter type and has warned against efforts to slow a rapid heart with regular rhythm. Others do not so closely restrict its application; Christian[19], notably, claims striking effects on the changes of cardiac insufficiency whether or not the heart is irregular. He concludes: "Digitalis is fully as effective in the treatment of chronic cardiac cases without auricular fibrillation. Even when the heart rate is slow, striking results may be produced whether fibrillation is present or not. If symptoms and signs of cardiac decompensation are marked it is rare to fail to get a digitalis effect irrespective of the cardiac rhythm."

In discussing the proper sphere for digitalis Luten[2] gives this warning: "Myocardial insufficiency is an indication for digitalis; auricular fibrillation with rapid ventricular rate is an indication for digitalis; tachycardia *per se* is not an indication and may even constitute a distinct contra-indication."

Some of the most harmful effects may be caused in such rapid hearts, for example in febrile cases or hyperthyroidism, where digitalis is given in full doses in a futile effort to slow an already toxic heart; in some febrile conditions, notably pneumonia, and in hyperthyroidism the drug has a certain limited value, but it is not merely for slowing the rate and should never be pushed with this sole object in mind. Recently Wyckoff, DuBois and Woodruff[20] published an extensive study of the use of digitalis in pneumonia, drawing the conclusion that there is no evidence that routine digitalis therapy results in a lowered mortality and there is some evidence that it is dangerous. The danger arises largely from the fact that the usual criteria of digitalis action are obscured or absent. In congestive heart failure there are three guides to control medication:

1. Certain actions on the cardiac mechanism shown by ventricular slowing and by changes in the electrocardiogram.
2. Clearing up of signs of heart failure.
3. Appearance of mild toxic phenomena.

In pneumonia, clearing up of signs of failure cannot be used as a guide and except for ventricular slowing in patients who have shown auricular fibrillation, practically the only evidence of digitalis effect is found either in the electrocardiogram or in the toxic effects. Even the clinical symptoms of toxicity are not a sufficient guide to prevent an increased mortality from the use of the drug, the figures showing that in patients receiving large doses there is a definitely greater mortality even before they show symptoms of early or late digitalis toxemia.

Another pernicious error is the routine pre-operative use of digitalis in cases considered poor surgical risks. Here the indications for its use must be clear-cut and definite, for in the relatively normal or even slightly damaged heart with no evidence of failure, digitalis has little, if any, value; and full effects can be obtained so rapidly by massive doses that pre-operative administra-

tion is rarely necessary unless there is evidence of congestive heart failure, for which digitalis would be indicated even if no operation were contemplated.

Digitalis dosage today is based on much better understanding of the principles of its action, its absorption and elimination than even a few years ago. Digitalization, that is, the production of full therapeutic or minor toxic effects, was found by Eggleston[4] to require .15 gm., later revised[21] to .1 gm. of active digitalis per ten pounds of body weight. This amount was given in divided doses beginning with a fourth or more of the calculated amount. If the period of digitalization extends over two or more days provision must be made to compensate for elimination, which was found by Pardee[22] to average .15 gm. per day, with variations from approximately half to double this amount. The variable rate of elimination is also important in determining the maintenance dose required, this being done for each individual case unless one is to have either ineffective maintenance or else cumulative action and severe toxic symptoms. Absorption of a single dose of digitalis from the digestive tract is essentially completed within about six hours and it is possible to produce maximal digitalis action in from twelve to eighteen hours. As a result of this six hour absorption rate, according to Eggleston: "The observance of a six-hour interval between doses allows time for the complete absorption of the preceding dose and development of its full action on the heart so that if the patient is examined just before the administration of each dose dangerous intoxication can absolutely be preprevented."

This work has been of great value as a basis for efficient digitalis therapy, especially in urgent cases where rapid action is important. When Eggleston's exact directions are followed the method is relatively safe, though less aggressive dosage is often more advisable. Willius[8] says: "If digitalis is administered to a patient in large amounts, there is no way to effect its removal, and, except in a few instances, as much can be accomplished with cautious administration of small amounts. In the so-called emergency case it is necessary to be very cautious in the administration of digitalis because the clinician usually has not had a chance to study the patient carefully and he may be dealing with a case in which digitalis is contra-indicated." Care is especially necessary in patients who have taken digitalis within the preceding two or three weeks and further warning can be given to make no effort to fully digitalize patients who are not in bed where they can be watched for symptoms of overdosage.

Bedridden patients with profound heart failure constitute a different problem from the ambulatory patient with only minor grades of failure; the former may require full digitalization, the latter often does not. Gold and DeGraff[23] have found that "the degree of heart failure determines the effective concentration of digitalis in the body necessary to produce full therapeutic effects" and that ambulatory patients required a much lower effective concentration of the drug, which could be obtained by relatively small doses. Thus they show a wider margin between the effective therapeutic dose and the maximum amount tolerated without toxic symptoms. These writers also found that full therapeutic results could be maintained with a concentration lower than that needed to produce these results in the beginning. As a result of their observations they state:

"In the present state of knowledge it is more logical to follow the principle of digitalis dosage laid down by Withering, which is not to give as much digitalis as patients can tolerate without toxic symptoms, but only so much as is necessary to produce full therapeutic effects judged by the available criteria of improvement."

On the appearance of any of the symptoms of digitalis intoxication prompt withdrawal of the drug is as a rule urgently indicated, for some manifestations of its action may persist for many days, depending upon the amount of accumulation of the drug and especially the rate of elimination. There are exceptions to this where therapeutic results cannot be obtained without minor toxic effects, but in general safety lies in observing the following rules, suggested by Bastedo.[24]

Digitalis should be stopped or at least the dosage should be decreased:

1. When digitalization is shown by the electrocardiogram.
2. When desired results are obtained, as disappearance of edema, slowing and regularity of the pulse, etc.
3. When anorexia, nausea, or vomiting occurs.
4. When headache, dizziness, light headedness or delirium occurs.
5. When visual disturbances appear.
6. When the heart rate falls below 60.
7. When the rate slows suddenly or heart block occurs.
8. When tachycardia occurs without obvious cause.
9. When frequent premature beats occur.
10. When coupled rhythm occurs.
11. When a previously regular ventricular rhythm becomes irregular or intermittent.
12. When sinus arrhythmia appears in normal

rhythm cases or phasic arrhythmia in auricular fibrillation cases.

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Case Report

VASOMOTOR CHANGES IN PARKINSONISM

Report of Case Simulating Raynaud's Disease

WALTER D. ABBOTT, M.D., Des Moines

Vasomotor phenomena in postencephalitic parkinsonism are frequently seen, but the rarity of severe vasospasm in this condition seems to justify the report of a case and survey of the literature.

Oily skin is one of the classic findings, but early scleroderma, and blue, cold extremities with severe pain are unusual symptoms of parkinsonism. Recent experimental and clinical investigations have definitely indicated that the sympathetic nervous system plays an important role in these disorders. Solowjewa and Stschedrakar, working with pharmacologic methods, describe variable alterations of vegetative tonus in chronic encephalitis, and Kaufman, Svaitsky and Fried have noted disturbed smooth muscle function in these cases. McKay calls attention to early scleroderma in a case of parkinsonism following carbon monoxide poisoning, and states that he has occasionally seen similar skin changes in postencephalitic conditions. Adson has observed vasospasm in this type of patient, and I have occasionally seen vasospasm and early scleroderma accompanying the other findings of the malady.

Schoeneman has noted an increase of salivation and sweating, coldness of hands and feet, often with cyanosis, and Hoffman mentions symmetrical gangrene of the hands, giving a case report of trophic ulcers of the nose, oral cavity and one hand in parkinsonism. Wilson and Lewis report a case of parkinsonism with vasomotor disturbances simulating Raynaud's disease, such as bilateral, cold, cyanotic extremities with trophic ulcers at the tips of the fingers.

REPORT OF CASE

J. C., a railway conductor, aged fifty, single, had an irrelevant family history, and his past history was negative except for a very severe attack of influenza in 1924, accompanied by headache and insomnia. One year later he underwent a thyroidectomy because of tremor of hands and feet, spastic gait and slowed speech, but failed to obtain relief from the operation. The spasticity gradually grew worse, and in August, 1929, he went to the Mayo Clinic, because of a dull pain in the left lumbar region. A cystoscopic examination at that time revealed a torsion of both kidneys with possible fusion of the upper poles; there were no signs of obstruction. His case was diagnosed postencephalitic parkinsonism, and he was advised against further surgery. After returning home he underwent two more cystoscopic examinations, with the same diagnosis. In October, 1929, both hands and feet became blue, cold and sweaty. This was worse during cold weather, and a few months later both feet began to pain him. The pain was equally severe when in bed or on his feet. It caused him a great deal of discomfort during the cold winter months.

On May 27, 1930, the patient was referred to the neurologic service at the Methodist Hospital by Dr. L. D. Powell of Des Moines. On admission the patient's chief complaints were pain in both feet and in the left lumbar region. The general physical examination was essentially negative except for tenderness in the left lumbar region and cold, clammy, cyanotic extremities. The radial, popliteal, dorsalis pedis and posterior tibial arteries functioned normally, and there was no marked blanching when the feet and hands were elevated. The blood pressure was 112/78 mm. of mercury; the urinalysis showed a specific gravity of 1.015 and was otherwise negative. The hemoglobin was 75 per cent, erythrocyte count, 3,369,000, and the leukocyte count, 6,000 per c. mm. The Wassermann was negative.

The neurologic examination revealed a rather depressed and stubborn individual with the typical mask-like facies and generalized spasticity of parkinsonism. The fundus was normal. The deep tendon reflexes were moderately exaggerated and the abdominal reflexes were markedly diminished. The Babinski test elicited a plantar flexion response. The gait was spastic with a slight tendency to propulsion. There was a moderate cogwheel phenomenon in both arms and a definite intention tremor. The handwriting showed a fine tremor and micrographia. The speech seemed to be affected slightly, but not in proportion to the other findings.

The patient refused to submit to a spinal puncture or basal metabolic test, but the spinal fluid had been normal when taken at the Mayo Clinic. Because of the cold, cyanotic, sweaty extremities with extreme arch pains, he was given thirty million units of typhoid vaccine intravenously and the skin temperatures were as follows:

	Before Vaccine	After Vaccine
Mouth	98.0° F.	101.0° F.
Right hand	89.5	96.8
Left hand	89.0	96.0
Right foot	88.8	94.0
Left foot	88.0	93.0

The reaction from the fever was quite severe and lasted four hours. During that time and for six hours afterward, the hands and feet were warm, dry and pink. The pain in the arches was completely relieved until the following morning.

A sympathectomy was considered, but because of the generalized nervous involvement it was decided to attempt palliative treatment in the form of contrast baths, massage and repeated typhoid vaccine injections. The patient would not cooperate, however, and soon left the hospital.

DISCUSSION

The history of influenza with severe headache and insomnia was very suggestive of encephalitis and with the advent of parkinsonism a year later, the diagnosis seemed obvious. It is evident that the thyroidectomy was unnecessary and the result of an error in diagnosis. The vasospastic condition was unusual because of its severity and its occurence in the male sex. Brown and Allen have urged caution in making a diagnosis of Raynaud's disease in the male. The painful arches were characteristic of the "painful flat feet" group, which Adson and Henderson have shown to be relieved by lumbar sympathectomy. During my association with Adson I had the opportunity to observe cases in this group; also two patients with parkinsonism who submitted to sympathectomy with only partial relief from the spasticity. Due to the widespread nerve involvement it was felt that a sympathectomy was not justified unless the vasospasm produced trophic changes.

SUMMARY

The above case is of value from a diagnostic and physiologic standpoint because it lends evidence to the claim that the sympathetic nervous system plays a vastly more important role, in many conditions, than it has hitherto been accredited.

820 Equitable Building.

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RED SQUILL POWDERS AS RATICIDES

A recent leaflet from the United States Department of Agriculture dealing with "Red Squill Powders in Rat Control" will be of interest to physicians since it is not unusual to be called upon to treat poisoning from strychnine and arsenic, accidentally obtained where these drugs have been used to control rodents. The new raticide is prepared from a bulb grown in Europe and which, as a result of recent study, has been so standardized that its toxicant properties can be controlled and maintained in uniform strength.

This powder, although effective in destroying rats, is relatively harmless to human beings and domestic animals. Even when taken in comparatively large amounts, the only unfavorable signs noticed are of nausea and vomiting.

Those requiring additional information on this matter should ask for Leaflet 65-L from the United States Department of Agriculture or order the Technical Bulletin 134-T (price 10 cents), from the Superintendent of Documents, Government Printing Office, Washington, D. C.

IODIZED EGGS

An interesting experiment is being tried in Germany by Dr. Med. Zickgraf, of Bremerhaven, on the use of iodized eggs in supplying iodine where this drug is indicated. Dr. Zickgraf reports that in patients on this diet of iodine, the improvement recorded is comparable in every respect to that seen when iodine is administered in other forms.

The iodized eggs are produced by feeding the hens with food containing iodine or iodine salts. Incidental to his experiment, he notes that this addition to the dietary of the hens increases considerably the production of eggs.

STATE HEALTH COMMISSIONER'S PAGE

D. C. Sturlaugh, M.D.

The most prevalent diseases during the month of June were scarlet fever, whooping cough, chickenpox, measles and smallpox in the order named.

SCARLET FEVER

The prophecy made by the department not long since that the number of cases of scarlet fever for the year would approximate that for 1929 (the year with the greatest number of cases since 1924) bids fair to be fulfilled, for in June, 237 cases of this disease were reported. This number is the same as that reported for the month of May. The total for the first six months is 2,428, while the total for the first six months of 1929 was 3,353. The number reported for last month was 51 more than for any June since 1924.

WHOOPING COUGH

Sixty more cases of this disease were reported than were reported in May. The total for six months is 565. The total for the same period of 1930 was 449. Twenty-nine deaths had occurred previous to June 1. This is 18 less than occurred during the first five months of 1930.

SMALLPOX

The number of cases of smallpox reported was almost exactly one-fourth of those reported for June, 1930 (106 compared to 427). This does not mean that recommendations for vaccination should not be made to your clientele, for 106 cases in one month need not occur if the population is properly protected by vaccination.

VENEREAL DISEASES

The efforts made by the department to encourage the reporting of cases of venereal disease appear to be bearing fruit, for 155 cases of syphilis and 238 cases of gonorrhea were reported. In May there were reported 76 cases of syphilis and 99 cases of gonorrhea. During the six months of 1930, 608 cases of syphilis and 798 cases of gonorrhea were reported.

The new law anent reporting cases of gonorrhea and syphilis, which requires that cases of these diseases be reported by the attending physician directly to the State Department of Health instead of to the local health officer is designed to stimulate better reporting and promises to bring about that result. This method of reporting obviates the possibility that the identity of the patient may become known locally. When cases of syphilis in the primary or secondary stages are properly reported to this office a package containing five doses of 0.5 grams of neoarsphenamine will be sent immediately to the physician making the report and no charge will be made. However, certain definite information must be included in the original report, notably the date of onset and the probable source of infection before the arsenical will be sent.

TYPHOID FEVER

Although it is too early to foretell the record which typhoid fever will make during the present year at least the figures for the six months now past will stand. With the exception of the year 1925 the first six months of the current year has had the fewest cases of typhoid fever since 1924. In 1925, 14 cases were reported during the first half of the year. In the corresponding period of 1931, 16 cases were reported. Instruction as to the mode of transmission and the method of prevention should be given by the attending physician to the attendants of all patients ill with the disease, in an effort to prevent secondary cases. Pamphlets containing such instruction may be obtained without charge upon application to this department.

SPECIAL ARTICLE

Editor's Note.—This is the third of a series of four special articles dealing with Coronary Diseases. The last article will be entitled Treatment and will appear in the September Issue of the Journal.

CORONARY OCCLUSION

Fred M. Smith, M.D., Iowa City

The recognition of the clinical syndrome of coronary occlusion introduced a new chapter in our knowledge of coronary artery disease. It furthermore stimulated a widespread interest in the subject which led to an extensive investigation of the anatomy,[3, 4, 5, 6, 9, 35] physiology,[31, 32, 36, 37] and pathology of the coronary arteries,[2, 8, 12, 13, 39] experimental and clinical electrocardiographic studies,[7, 17, 40] and finally, a careful clinical survey of the various aspects of coronary artery disease.[10, 11, 12, 13, 41] While the syndrome was first definitely identified by Obrastzow and Straschesko[42] in 1910, the report by Herrick[43] in 1912 and his later publication[44] on the subject, stand out as a milestone in the subsequent developments in this new field of medicine.

The essential features in the pathology of coronary occlusion have been discussed. It should be remembered, however, that coronary occlusion, except in rare instances, represents a terminal manifestation of coronary artery sclerosis. The changes are comparable to those ordinarly associated with angina pectoris. In this connection, the findings of Klotz and Lloyd[2] are of particular interest. These investigators made a comparative study of the clinical and pathologic findings in a series of twenty-six cases of advanced coronary artery sclerosis and a series of eighteen cases of coronary occlusion. They concluded that there was no significant difference between these series, either in the clinical manifestations or the postmortem findings. It is interesting to note that the incidence of angina pectoris was practically the same in the two groups.

SYMPTOMS

The clinical manifestations of coronary occlusion in the typical form are readily recognized. The distribution, character, and duration of the pain, the accompanying shock and fall in blood pressure, the symptoms and signs of cardiac damage and the later development of fever and leukocytosis produce a distinctive clinical picture. There is a wide variation in the clinical manifestations however, depending in a large measure on the extent of the myocardial damage. The damage to the heart may thus be so overwhelming that the patient dies suddenly or within a few hours or, on the other hand, so slight that few or no symptoms are produced, and the condition is not recognized. Again, in those instances in which the pain and accompanying shock predominate in the clinical picture, the associated symptoms and signs of cardiac damage may vary to a remarkable extent. In some, there may be no significant dyspnea and no apparent structural change in the heart except as demonstrated by the electrocardiograph. In others, the dyspnea is a more prominent feature and there are perhaps obvious signs of myocardial damage. Finally, in a small group, the onset is manifested by intense dyspnea with little or no pain.

Pain is the outstanding and most characteristic symptom of coronary occlusion. Many give a previous history of chest pain, which in some instances is typical of angina pectoris. Occasionally the distress is over the lower chest and upper abdomen and mistaken for a gastric disturbance or a gall-bladder disease. In another group, the occlusion is the first evidence of coronary artery disease. The onset of the pain may be abrupt or gradual, extending over a period of two to three days before reaching the severe form. During the period of gradual onset, the distress is usually intensified by exercise, excitement, or other factors which increase the work of the heart. In those cases with an abrupt onset, the patient is not infrequently awakened from sleep during the night and often during the early hours of the morning by the terrific distress. The site of the pain is similar to that in angina pectoris, except perhaps for a greater tendency towards the lower sternum and upper abdomen. In an occasional instance, as in angina, the distress may be entirely confined to the abdomen. Usually the pain has a greater area of distribution and extends laterally in each direction from the sternum. It is frequently transmitted to the left shoulder and down the arm and often to both arms. Whereas, in those with a previous history of angina pectoris, the pain may have extended to the left arm, it will frequently be felt in both arms after an occlusion. The pain may likewise be felt in the neck and in various locations about the head and in rare instances, may be transmitted through the chest to the angle of the left scapula. The distress, particularly in those cases with a gradual onset or in the milder form, is often described as a mild feeling of oppression or heaviness of the chest.

On the other hand, it may be the most agonizing, tearing, boring, or constricting pain. While there is usually a steady distress, the intense manifestations often come and go in wave-like fashion. The duration in the more severe type varies from a few hours to days and may persist in a minor form, even after repeated hypodermic administrations of morphin. While the above type of pain often follows the occlusion of a larger vessel, instances of even fairly large cardiac infarction are frequently encountered at necropsy which were not manifested by significant symptoms. The pain, if present, must have been of a very mild nature or in the case of angina pectoris, perhaps no more than that experienced during an ordinary attack. Again, the clinical picture may be so dominated by dyspnea that the pain is overlooked.

The extent of the dyspnea represents a measure of the response of the myocardium to the infarction. Pain and dyspnea are thus not necessarily present to the same degree. Even those patients with severe pain may have no appreciable shortness of breath, but if cardiac failure later develops, the respiratory distress gradually assumes a prominent aspect in the clinical picture. It is to be recalled, however, that there are instances in which the dyspnea dominates the picture at the onset, and the pain is slight or possibly absent. In these, it is assumed that there is extensive functional disturbance of the myocardium.

The onset of severe pain is ordinarily accompanied by profound shock in which the ashen gray color, the profuse perspiration, the feeble, and even imperceptible pulse and the fall in blood pressure are the conspicuous features. The normal color usually returns and the perspiration disappears after the severe pain subsides. The exhaustion and the feeble pulse, however, may continue for days, depending on the extent of the functional disturbance of the myocardium. The systolic blood pressure may recede to 90 mm. Hg. or even lower. In those with an unrecognized hypertension, the degree of the reduction in the blood pressure is likely not to be appreciated. Following the occlusion of a smaller vessel, the changes in the blood pressure are probably slight and transient in nature. Ordinarily, however, after the closure of a larger artery, it rises slowly but may remain at a level considerably below the original.

PHYSICAL FINDINGS

There is a great variation in the physical findings of coronary occlusion. Some patients give a history of hypertension and have the customary changes in the cardiovascular system. Again, the findings prior to the accident may be surprisingly negative. During, and even after severe attacks of pain, there may be very little alteration in the cardiac findings. The character of the pulse and the fall in blood pressure have been mentioned. There is usually some acceleration in the cardiac rate, but rarely above 100 per minute. An irregularity from premature contractions is often noted. The character of the cardiac tones is perhaps one of the most constant features. The tones are frequently distant and poorly differentiated. This, with a gallop rhythm, may be the only demonstrable physical evidence of cardiac damage. The occasional associated emphysema may account for the distant sounds in some instances. A systolic murmur may be heard or may appear later. This murmur in the beginning is often very faint, but later frequently becomes more conspicuous. There may be no appreciable increase in the size of the heart with the above findings. In those cases with more extensive damage of the myocardium the cardiac signs are usually more prominent, with perhaps the additional manifestations of pulmonary edema and engorgement of the liver.

A pericardial friction rub is occasionally demonstrated. It is the only distinctive physical sign of cardiac infarction. The other findings are common to the arteriosclerotic form of heart disease without demonstrable occlusion. A diligent search for a pericardial rub is thus warranted in every instance in which a coronary occlusion is suspected. It is usually heard on the second to fourth day, frequently between the apex and sternum, occasionally higher. It may be soft and transient in character and ordinarily disappears entirely after one or two days.

TEMPERATURE AND LEUKOCYTE COUNT

The temperature and leukocytosis are of considerable importance. They are apparently solely dependent on the extent of the myocardial infarction. The fever is usually not noted until the second day and ordinarily reaches the highest peak on the third day, after which it gradually subsides. In occasional instances it may persist for a week or even longer. The usual range is between 99° and 102°.

An increase in the leukocytes has been observed as early as one to two hours after the onset of the clinical manifestations of occlusion. In general, it parallels the temperature and ranges from 12,000 to 20,000 per c.mm. These two findings have been helpful in estimating the extent of the myocardial infarction. The physician is more justified in being extremely cautious and guarded in his prognosis in the presence of brisk leukocyte

and temperature reactions, particularly if they persist longer than usual.

ELECTROCARDIOGRAPHIC FINDINGS

The electrocardiographic findings following coronary occlusion are characteristic and may be the only evidence of structural change in the heart. It is important that curves be taken as soon as possible after the accident and thereafter at one to two day intervals during the first week. The changes, which are progressive in nature, as one would expect from the character of the pathologic lesions, may otherwise be overlooked entirely. The alterations in the T deflection and RT segment are the most conspicuous findings. Soon after the cardiac infarction, the T wave, or even the entire RT segment may be elevated, especially in Lead 1. Later, there is a progressive reduction in this phase of the ventricular complex and finally a sharp negative T deflection. The change in the T wave of Lead 1 is accompanied by a similar but less conspicuous alteration in the corresponding wave of the other leads. Occasionally, the reverse order is observed in which the T negativity is greatest in Lead III. There may be, in addition, a progressive reduction in the amplitude of the ventricular complexes. Intraventricular conduction defects occasionally develop. Premature contractions, particularly of the ventricular type, are common and ventricular tachycardia has been reported. There is also the possibility of an auricular fibrillation.

PROGNOSIS

We know from experimental and clinical experience that the occlusion of a large artery is compatible with life and often a very efficient myocardium. The writer has recently observed a patient who, at the age of fifty years, had the clinical manifestations of an extensive cardiac infarction. Following a period of rest, however, he apparently made a complete recovery and was able to engage in active farm work for five years without any impairment in the cardiac function. At this time, he had another cardiac infarction which was followed by progressive cardiac failure and a fatal termination. At necropsy an old infarction was found resulting from the occlusion of the ramus descending of the left coronary artery, and in addition, a more recent occlusion of the right coronary artery. Another patient is recalled who, two years ago, experienced the most excruciating type of pain which lasted for hours and persisted, in a minor form, after repeated hypodermic administrations of morphin. This patient is a very active professional man and at present has no signs of impaired cardiac function. It is believed that he would pass the most exacting life insurance examination, if his past history were not known. According to a recent report by Conner and Holt[45] on the study of a series of 117 cases, 109 (93 per cent) were in good health at the end of three months following the first occlusion, and 25 (21 per cent) were well after five years. They furthermore cite four instances of ten year survival and one of seventeen years.

In general, the course is more favorable in those in whom the heart withstands the accident without signs of cardiac failure, whereas the outlook is grave in those with signs of extensive impairment of the cardiac function during the initial stages of the occlusion. Even though the initial period is survived, the later course is likely to be stormy. There are, however, numerous exceptions and the studies by Conner and Holt in this connection are extremely interesting. In their series of 172 cases in which they were able to study the relation of the severity of the symptoms to the immediate prognosis, almost one-third of those that recovered were in the group with the extreme initial clinical manifestations. In spite of the apparent course, however, the future is indefinite. Experience teaches that recurrences are frequent and there is always the possibility of embolic manifestations from the detachment of a bit of the clot which forms on the endocardium at the site of the infarction. Finally, the course is dependent to a remarkable extent on the treatment of the patient following the occlusion. Even though the damage to the heart may not seem great at the time of the accident, the chances of recovery may be eliminated by allowing the patient on his feet too soon.

DIAGNOSIS

The typical case of coronary occlusion is seldom overlooked by those familiar with the syndrome. When, however, the pain is confined to the epigastrium or extends to this region, particularly when accompanied by tenderness, rigidity, nausea and vomiting, the diagnosis may be extremely difficult. Patients of this age may have perforating peptic ulcer, gall-bladder disease, or acute pancreatitis. The history is extremely important. It may point to a peptic ulcer or gall-bladder disease or, on the other hand, indicate a previous angina pectoris. A careful survey of the heart will, in most instances, prevent the physician from overlooking a coronary occlusion. In doubtful cases, the electrocardiogram may establish the diagnosis. The value of the electrocardiogram in the diagnosis of coronary occlusion has not been fully established. In the cases studied by the author, however, there has, in every instance, been

significant alteration in the electrocardiogram. In some, this might have been overlooked had not progress curves been taken.

The differentiation of angina pectoris and coronary occlusion was discussed in connection with the former condition. It is well to bear in mind, however, that a coronary occlusion frequently precipitates, and often terminates an angina pectoris. It is believed that minor coronary accidents are common during the course of angina, and at present, generally overlooked. These patients should be examined with this possibility in mind whenever the pain differs in any essential respect from that of the usual attack and particularly if it occurs while at rest. It is possible that a more detailed study of the physical findings, blood pressure, leukocyte count and frequent electrocardiographic observations may enable us to recognize the minor forms of coronary occlusion much more often than in the past, and alter our conception of certain instances of angina.

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A NEW MEDICAL SCHOOL

Announcement has been made by the governor of Louisiana that beginning with the fall term of this year a new school of medicine will be opened under state sponsorship. The new school will give the first two years of the medical course at Baton Rouge and the last two years in New Orleans in the Charity Hospital. In establishing the new school it is pointed out that the Charity Hospital will have ample space to accommodate students in the State School as well as those from Tulane University, who now use this institution for clinical material.

CHILDLESS MARRIAGES

That birth control or decreased fecundity, or both, is responsible for nearly twice as many childless families in cities as compared with country districts is indicated by an analysis of hitherto untabulated and unpublished data from the federal census made public by the Milbank Memorial Fund.

This striking difference in the number of no-child marriages in the urban and rural populations was revealed in a study of the original enumeration schedules for 69,620 married women of native-white parentage, taken from the 1910 census. The study was made by the Fund's division of research.

Among women 40 to 49 years of age, 16 per cent of those living in cities were childless, as compared with 9 per cent of those living in the country. The urban samples were selected from the 33 northern cities of 100,000 to 500,000 population, and the rural samples, from 74 counties neighboring the cities.

Childless marriages were found to be two and one-half times as common among professional people in the cities as among farm laborers. In the city groups, 18 per cent of the wives of professional men were childless, as were 16 per cent of the wives of business men, 15 per cent of the wives of skilled workers, and 14 per cent of the wives of unskilled workers. Among the rural groups, 10 per cent of the wives of farm owners and 7 per cent of the wives of farm renters and of farm laborers, were without offspring.

Whether this greater frequency of no-child families among urban married couples, and especially among the "upper" classes, represents choice or sterility or both, is not apparent from the data analyzed. However, it is suggested by collateral evidence that, because of the greater expense of having children in cities and in view of the higher standards of living of the professional classes, birth control is practised to a greater extent among the so-called "upper" classes.

This analysis of childless marriages is one of a series of related studies of population problems upon which the Milbank Memorial Fund is engaged. The directors and advisers of the Fund believe that scientific knowledge concerning certain phases of population problems will be a valuable aid in directing present and future programs in public health and social welfare.

The JOURNAL of the Iowa State Medical Society

ISSUED MONTHLY

Ralph R. Simmons, Editor.....Des Moines

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STATE SOCIETY COSTS

At the meeting of the House of Delegates during the last annual session the Trustees reported a deficit in the finances of the society amounting to $5,081.85 and recommended an increase in membership dues to remedy the condition. This report, while presenting totals and classifying gross expenditures, failed to indicate the specific items of expense and from this omission in the report have arisen some misconceptions concerning the actual channels of disbursement.

In an earlier editorial we have attempted to describe the many activities and worthwhile achievements of the State Society; and in this editorial we shall show the exact expenditures during the past year on account of these various activities and accomplishments.

In order to determine specifically how the society funds were spent, the records of the society have been critically reviewed and every entry carefully classified. In the accompanying chart these classified expenditures are graphically presented and show amounts expended in both totals and in percentages. It behooves every thoughtful member of the society to study these figures carefully and become informed upon this vital phase of our society's operation; more especially if such a member hopes to discuss society management with any degree of accuracy.

It is the will of the Board of Trustees and other officers of the State Society that every member should be thoroughly informed as to how, why and at what expense the present constructive program of the society is being carried on, as voted and directed by the House of Delegates. It is hoped, therefore, that every Journal reader may give careful consideration to the following facts.

Attention is directed to the fact that the items of major expense are respectively, the publication of the Journal, the salaries of the necessary office personnel, the expenses incurred by the activities of the Legislative Committee, the costs of the studies of the Committee on Medical Education and Hospitals, the Speakers Bureau and the Annual Session. These six items are responsible for over 75 per cent of all costs for the year.

It has not come to our attention that the expense involved in the production of the Journal has been debated. We are led to believe rather, that comparing the quality of our Journal and its costs with that of other state publications of a similar character, we are fortunate in our publication contracts. It is to be borne in mind further that the Journal is essentially maintained by paid advertising and that the annual cost to each member is less than one dollar.

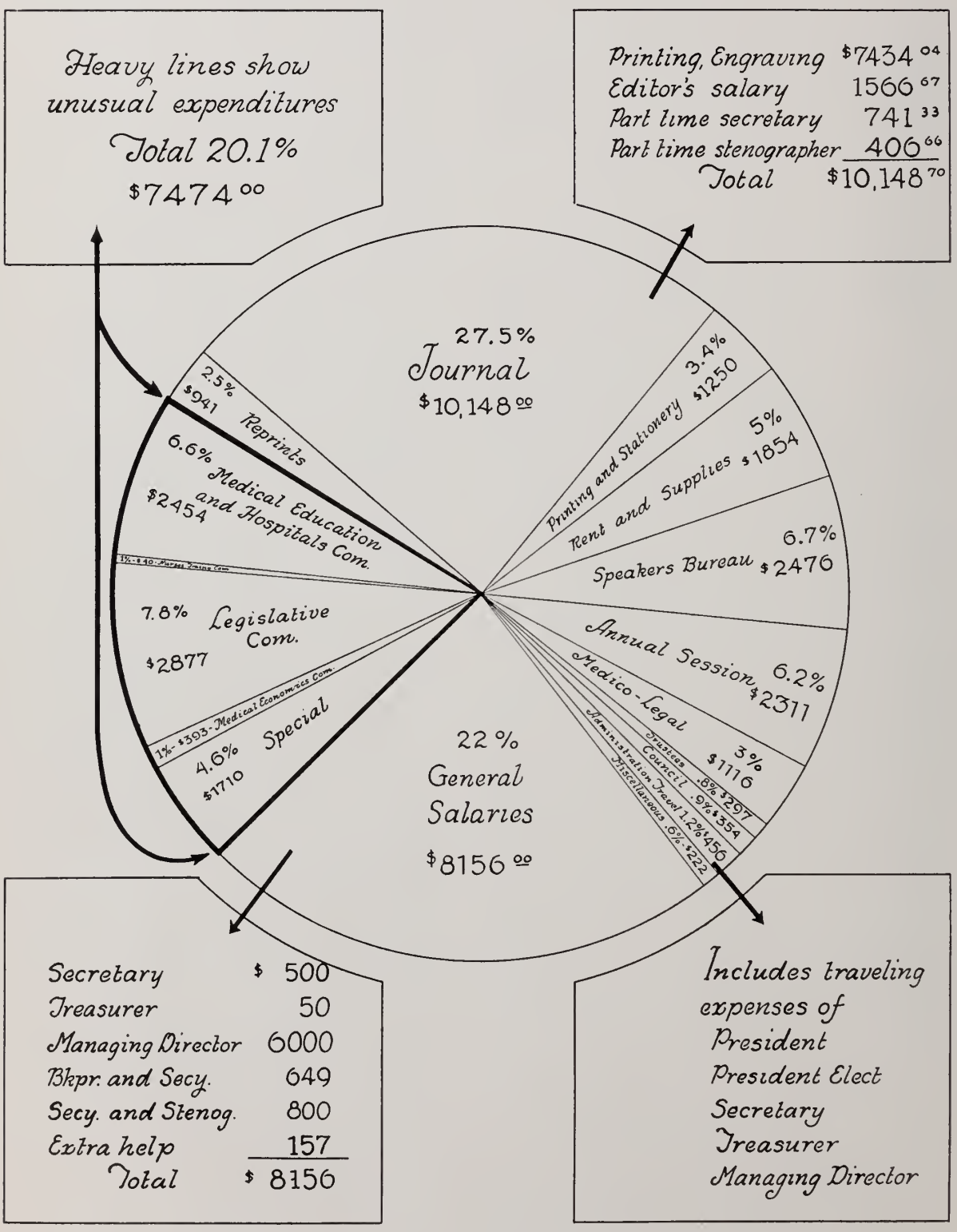
To discuss salaries and the amount of personnel necessary for the conduct of society affairs involves an unending delineation of the activities of the central office. Those in a position to understand all of the varied calls made upon the central office feel that the personnel has been maintained at a minimum level and that any further curtailment of help would cripple materially the effectiveness of this organization. The largest single salary paid is that given to the managing director; an office created and continued during the past three years by the will of the House of Delegates.

Specific attention will not be directed in this article to the activities of the Legislative Committee and its accomplishments in the last legislature since these matters will be discussed in a later article. It should be pointed out, however, that this expense should properly be divided in half, since it is a biennial expense which should be charged in two consecutive years. If only one-half of the expense for legislative activities were charged to the year 1930-31, the annual cost would be $1,438, or 3.9 per cent of the total.

The amount required for the activities of the Committee on Medical Education and Hospitals is an unusual one and barring the development of some unforeseen exigency, will not be required again for many years. This item could very properly be distributed over a period of several years if an average expense of this committee to the society is to be reckoned. It will be recalled that this committee was directed in its work in detail by a special act of the House of Delegates, and that their investigations were considered of such major importance to the welfare of all members that a special meeting of the House was ordered to receive their report.

The Speakers Bureau, like the Journal, is

Expenditures 1930-1931



purely educational in motive and essentially self-supporting in its operations. If perpetuated, the Bureau may become an item of greater expense, since the present plan of financing its activities may prove inadequate. That it fills a definite demand for scientific education is testified by the enthusiasm with which its services have been received and the increasing demand for speakers and courses of instruction. Certainly its support is in keeping with the recommendations of the American Medical Association and the practice of other state societies.

No comment is required relative to the expense of the Annual Session. Each member in attendance at any recent session appreciates the value of this conference and the necessity for expense in its operation.

Particular attention is directed to the item of Administration Travel shown in the accompanying chart, since this expenditure has been questioned in several quarters. This item of $456 or 1.2 per cent of the total expense, covers actual mileage and hotel expense incurred by the executive officers of the society in transacting the affairs of their respective offices. Needless to say, this sum covers but a small part of the actual money spent by these officers in the performance of their duties and makes no provision for loss of time from their private practices, a loss which they have cheerfully borne.

In conclusion, it may be pointed out that the present program of activities of the Iowa State Medical Society is in keeping with those of the more progressive medical organizations throughout the United States and the costs of these activities are favorably compared to the costs of other like organizations. The Journal, the Medical Economics Committee, the Medical Education and Hospitals Committee, the Legislative Committee and other bodies of our society have received special recognition for leadership in their particular activities from other state organizations and the officers of the American Medical Association.

The issue, if one exists, is not one of expense, but one of purpose. If economy exists in the management of our affairs, as our survey indicates, and a reduction of costs is demanded, then the House of Delegates, representing the members of our great society, must determine a reduced program of service and order their officers and committees accordingly. It becomes a question of progression or regression—a matter of society policy.

MEDICAL MENDICANT

A Dr. William A. Oyler has for some time past been approaching physicians in Indiana, Illinois and Iowa, telling a hard luck story and asking for donations. When he appeared in Illinois Dr. Harold M. Camp, secretary of the Illinois State Medical Society, sent a warning to the county officers of that state and to the secretaries of the surrounding state societies. Dr. Oyler appeared in Des Moines almost simultaneously with the letter which Dr. Camp sent to State Secretary Robert L. Parker. Immediate complaint was made to the police, with the result that Dr. Oyler was arrested and later released with an admonition to discontinue his activities in Des Moines.

Warning was then sent to the secretary of each county society in the state and the secretaries of the surrounding state societies, informing them of the latest developments. The following letter sets forth the facts in the case:

July 17, 1931.

Dr. Robert L. Parker, Secretary,
Iowa State Medical Society,
3510 Sixth Avenue,
Des Moines, Iowa.
Dear Doctor Parker:

I am enclosing a letter sent a few days ago to all of the County Medical Society Secretaries in Illinois relative to one Dr. Wm. A. Oyler who is evidently a beggar and has been working the medical profession for a number of years. I have received a number of letters from the Secretary of the Indiana Medical Association, the Editor of the Journal of the Indiana Society, and two or three letters from Dr. Arthur J. Cramp, Director, Bureau of Investigation of the American Medical Association, relative to the activities of this man over a period of years. Today I received a letter from one of our Northern Illinois Societies informing me that he worked in their County some two months ago. As Monmouth is only twenty-eight miles from Burlington, he may have gone into Iowa after leaving our County. Dr. Cramp informed me, in a letter received yesterday, that he is writing an article on Dr. Oyler which will appear in the Journal of the American Medical Association at an early date. There is no doubt that this man has received much money from the physicians who believe his hard luck story.

He told me that he had been located in Indiana and desired to move to Illinois,—and this seems to be the story he has told in the various places he has worked previously. Several of our men here signed his donation list, but as his story did not sound good to me, I turned him down and then made my investigation. You may hear of this man working in Iowa, and if so, you will be able to verify the information contained in my letter by writing to Thomas A. Hendricks, Executive Secretary, Indiana State Medical Association, Hume-Mansur Building, Indianapolis, or to their Editor, Dr. Albert E. Bulson of Fort Wayne.

Yours very sincerely,

(Signed) Harold M. Camp, Secretary,
Illinois State Medical Society.

HANDBOOK ON COMMITMENTS TO UNIVERSITY HOSPITALS

Under date of September 15, 1931, a bulletin of the State University of Iowa, University Hospitals, entitled "Law Relating to the Medical and Surgical Care of Indigent Persons," is being issued to all physicians, county officials, social workers and other of the hospital clientele.

This handbook takes up the various sections of the Perkins, Haskell-Klaus laws which govern the operation of the University Hospitals and the admission of patients thereto, section by section, and explains the functions and methods of operation of each. A comprehensive index will enable users of the handbook to quickly locate the desired information.

SPEAKERS BUREAU—JULY PLACEMENTS

On July 16 Doctors H. C. Willett and George McCreight of Des Moines presented a program before the Calhoun Medical Society. Dr. Willett conducted a skin clinic and Dr. McCreight gave a paper on "Dermatology."

The Speakers Bureau helped arrange the program for the summer meeting of the Upper Des Moines Medical Society on July 9, by securing five speakers. Dr. L. E. Pierson, of Sioux City, addressed the society on the subject, "The Treatment of Acute Gonorrheal Urethritis in the Male." Doctors J. T. Strawn, H. H. Dilley and H. C. Bone, of Des Moines, presented the following symposium: "The Treatment of Uncomplicated Cases of Gastric and Duodenal Ulcers," "Complications of Gastric and Duodenal Ulcers," "X-Ray Findings in Gastric and Duodenal Ulcers." At the request of the Bureau, Judge F. F. Faville, of Des Moines, was the dinner speaker.

At the invitation of the county medical societies in Louisa, Appanoose, Winneshiek and Wayne Counties, the Bureau arranged for chest clinics to be held as programs for meetings of these societies. The clinics were conducted by Doctors John H. Peck, D. J. Glomset, C. B. Luginbuhl, Des Moines, who were assisted by Doctors Wm. M. Spear, Oakdale, and H. W. Rathe, Iowa City. These physicians also discussed various phases of diseases of the heart and lungs at the evening programs held in conjunction with the clinics.

At the time the Louisa County Medical Society had their program, a meeting was sponsored for the people of the community. H. W. Rathe, M.D., talked to them on "The Vital Pump" and J. H. Peck, M.D., on "The Foe of Youth."

At a public ceremony in Leon, Iowa, Sunday, July 26, the cornerstone of the Decatur County hospital was laid. Walter L. Bierring, M.D., of Des Moines, gave the address in honor of the occasion.

SPEAKERS BUREAU SERVICES

In order that the members of the Iowa State Medical Society may know exactly in what ways the Speakers Bureau can be of assistance, the following detailed outline is presented:

SINGLE SPEAKERS

The Bureau has a list of physicians who are well prepared to present papers on medical subjects before society meetings. The list is too long to include here, and is constantly being increased, but it is safe to say that the Bureau is able to fill a request for a speaker on any medical topic desired. When a short program is desired, or one additional number for a program, one speaker will be sent to you. The length of his talk may be adjusted to meet the occasion.

SYMPOSIA

For an entire evening's program of a unified nature, a symposium is a desirable feature. Two or three men discuss the same subject from different points of view, or different phases of the same subject. The following symposia which have been presented through the Bureau represent some of the subjects which have been covered in this manner: psychoneurosis, thyroid, nephroptosis, kidney, peptic ulcer, gastric and duodenal ulcers, heart, lung, obstetrics, gynecology, etc. This symposial type of program has met with universal approval.

SERIES OF PROGRAMS

For any society that has had difficulty in arranging regular county meetings and programs, the Bureau is willing to conduct a series of three or four programs to help the society get started. These programs may be scheduled at whatever time or intervals during the year that the society sees fit. The choice of subjects to be covered may either be selected by the local society, or complete arrangements left to the Bureau.

CLINICS

Clinics as county or district society programs may be arranged for in the same way as for speakers. Since the clinic material is provided by the local physicians, the local society should decide what type of clinic can best be held there. Skin, pediatric, heart and chest clinics have been successfully conducted and the Bureau will be glad to arrange for any of these or other kinds at the request of any society.

EXTENSION POST-GRADUATE WORK

Through the cooperation of the College of Medicine of the State University, the Bureau is able to offer extension post-graduate courses to the physicians of Iowa. The value of this work was attested to by the unanimous approval of the two hundred doctors who took the work in the winter of 1930-31.

These courses are given for a ten weeks' period at definite times during the year. A series is beginning in September of this year. Another series is being planned to be offered some time after Christmas. Applications for this work must be made some time in advance. The county or locality which acts as a center has no responsibility

in the matter. The small fee paid by each member who enrolls to take the work helps to defray the traveling expenses of the lecturers.

MEDICAL FILMS

As a variation from the usual type of medical program, a medical film might be shown. Some of the newer films which are being produced on medical subjects are of the "talkie" type. Lists of the films which may be secured are kept by the Bureau and may be booked through it. A great number of the films may be shown without cost to the society.

LEGISLATIVE AND POLITICAL

The Committee on Public Policy and Legislation is prepared to make complete reports upon the voting record and attitude toward health and medical legislation of both senators and representatives of the Forty-fourth General Assembly. While such reports and addresses may be included in the same program with scientific or other papers, yet it is advisable to make them closed meetings and provide ample time for discussion and questions and answers. The Committee on Public Policy and Legislation urges that every society which is not entirely certain of the favorable attitude of either senator or representative should plan to devote to this subject a part or all of some meeting between now and the primaries next June.

MEDICAL ECONOMICS

The Speakers Bureau is prepared to furnish programs in accordance with the recommendation of the Medical Economics Committee adopted by the House of Delegates in 1930 that "Each County Medical Society is urged to devote at least one meeting a year to the consideration of local medical economic problems." Subjects for discussion are: County Fee Bill, County Contract for Care of Indigent Sick, Relation of Medical Society to Lay Health and Welfare Agencies, The Economics of Private Practice, Life Insurance Examinations, Irregular Practitioners, State Medicine.

STATE SOCIETY ACTIVITIES

The various officers of the Iowa State Medical Society are available at all times to present in general, or specifically, the activities and undertakings of the state organization. These addresses will cover such subjects as: The Program of the Iowa State Medical Society; What the Iowa State Medical Society Is Doing for County Societies and the Members; Where Your Dues Go; Law Enforcement; The Operation of the Perkins, Haskell-Klaus Laws; The Proposal for Group Insurance.

SERVICES TO LAY ORGANIZATIONS

In addition to the above services, the Speakers Bureau has the names of about fifty men who have signified their willingness to address lay groups on popular health subjects. If any such organizations in your county appeal to you for help in formulating health programs, and you are unable to furnish them with local talent, we will be glad to come to your assistance. This work is being definitely started and it is the expectation of the Bureau that a development of this phase of our activities will be of real benefit to the state of Iowa.

HOW SERVICES MAY BE SECURED

These services may be secured by any of the officers, or members acting in an official capacity, of all county or district medical societies by merely addressing such requests to The Speakers Bureau, Iowa State Medical Society, 1122 Bankers Trust Building, Des Moines, Iowa. No charge is made to cover the time and work of the speakers sent out by the Bureau. It is a rule, however, that any organization or group requesting a speaker, should pay the traveling expenses of that speaker except in the case of the state officers. Such traveling expenses are very slight and, when handled by the Bureau, may be kept uniform.

REFERRED REQUESTS

Any physician who so desires, may, when called upon to address some group on matters pertaining to medicine and health, refer this request to the Bureau. In such cases the Bureau will send the doctor who was specifically requested, if he cares to fulfill the engagement, or will find someone else to give the talk.

RECIPROCATION

The Bureau is eager to be of assistance to the component societies and their members. To make such a program successful, the help of the county and district societies is needed. Reliable information on able speakers, valuable papers and programs must come from them. The county secretaries and other officers must discover and make known the medical talent and progressive medical knowledge—the Bureau merely so directs and uses those factors, that the greatest number of the medical profession in Iowa may benefit from them.

SPEAKERS BUREAU COMMITTEE,
D. J. Glomset, M.D., Chm., Des Moines,
T. U. McManus, M.D., Waterloo,
J. C. Shrader, M.D., Fort Dodge,
F. A. Hennessy, M.D., Calmar,
H. A. Spilman, M.D., Ottumwa,
D. M. Nelson, Secretary.

THE FAMILY DOCTOR

Despite all that has been written and said about the family doctor, his patients have still to be heard from. General practitioners and specialists, surgeons and psychiatrists, all have had their say at medical-association meetings and in such interesting articles as that of Dr. Winford H. Smith's in the May sixteenth issue of the Saturday Evening Post, but the people who pay the bills have not had their day in court.

The present day popular sport of lambasting the medical profession has produced so many misconceptions and biased proposals that it is refreshing to find in the Saturday Evening Post the editorial here reproduced. Note that the writer's solution "keep up with medical progress," is a prominent part of the program of this society.—Editor.

On such a complex and baffling subject, presenting so many angles of approach, it is difficult to find a common point of view. More and more it becomes apparent, however, that one of the factors driving out the family physician is his own inability to keep up with the times. His patients say that except for minor ills he turns them over to specialists. He is becoming partly a diagnostician and partly a directory of his specialist friends—an expert information bureau. Is it any wonder, his patients rise to inquire, that he doesn't make enough money to go on being a general practitioner? Perhaps, to relieve economic pressure, he practices fee splitting—that ethical bone medical men have long been wrangling over. Or else he turns specialist himself, and another family doctor is gone.

There are, however, general physicians who make money, who perform all but the most delicate and specialized operations, who put to its fullest use their intimate knowledge of their patients' idiosyncrasies. That, after all, is why none of the suggested substitutes for the family doctor will ever fill the bill. That is why neither "group practice," government agencies, nor the out-patient clinics of private hospitals will ever force him to take down his shingle. For the practice of medicine is partly an art, not entirely a science. A successful general practice requires a man with what one doctor called "the shepherd's heart."

But if he is to make the good living he deserves, he must keep up with medical progress sufficiently to do the hard jobs that earn the big money. Those family physicians who volunteer to perform the indicated operation, to deliver the baby, to treat the sinus, and whose patients are confident of their ability—these are the prosperous family doctors of the future. Like any business, success in medicine demands constant work, apart from regular routine. It is not surprising or alarming that the doctor who hasn't "cracked a book" since medical school can't seem to stand the competition of clinics, specialists and hospitals. On that principle he wouldn't make a good living as a lawyer, an engineer or even a candlestick maker. But as long as progressive, prosperous, general physicians carry on their abundant practices in every section of the country, we need not fear for the future of a great American institution.

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Report of Violent Injuries Required by Law

We have been asked to call to the attention of the physicians of the state, the fact that a new law of vital interest to medical practitioners has recently been passed and below quote from a letter received from the Assistant Attorney General:

"This department on behalf of the Bureau of Investigation desires to call to your attention Chapter 51, Laws of the 44th General Assembly, which provides that any physician or surgeon, osteopath, osteopathic physician, or chiropractor, shall, within twelve hours after an application is made for treatment of an injury received through violence, report the same to the sheriff of the county giving the name, residence, if possible, and a brief description of the injury. This act was passed by the last General Assembly in order that it might assist the law enforcing officers in ascertaining or discovering criminals who may have been wounded during an attempted or a completed crime."

SOCIETY PROCEEDINGS

Appanoose County

The members of the Appanoose County Medical Society and the Ladies' Auxiliary held their regular monthly meeting Friday, June 26, at Centerville. The meeting was preceded by a dinner served at the Tumble Inn. The scientific program was presented by two Keokuk physicians: William Rankin, M.D., speaking on Prenatal Care and Obstetrics, and F. B. Dorsey, Sr., M.D., talking on Surgical Deliveries. The program was arranged by the Speakers Bureau of the Iowa State Medical Society.

Louisa County

The Louisa County Medical Society held its annual heart and chest clinic Thursday, July 9, at Wapello. Following the afternoon which was given over to clinical demonstrations of heart and lung cases, a six-thirty dinner was served, after which two scientific papers were presented: The Vital Pump, H. W. Rathe, M.D., of Waverly, and The Foe of Youth, John H. Peck, M.D., of Des Moines.

Sioux County

Friday, July 17, the members of the Sioux County Medical Society were guests at the home of Dr. John De Bey, of Orange City, for their regular meeting. The scientific program was furnished by L. E. Pierson, M.D., of Sioux City, who read a paper on Symptoms Requiring a Urologic Examination. Dr. Frank P. Winkler, of Sibley, councilor for the new third district, was present and spoke briefly on new laws regulating medical practice, the increase in dues, and some problems facing the medical profession in Iowa today. Several visiting doctors from Plymouth County were present. The meeting adjourned following a lunch served by Dr. De Bey.

F. C. Bendixen, M.D., Sec'y.

Winneshiek County

Friday, July 24, the physicians of Winneshiek County were favored with the presence of Dr. Daniel J. Glomset, Dr. John H. Peck, Dr. Channing G. Smith and Dr. L. R. Woodward. At this time, under the auspices of the Winneshiek County Medical Society, a heart and lung clinic was conducted at the Decorah Hospital, with Dr. Peck examining the lung cases and Dr. Glomset the heart cases. An interesting number of cases were seen and many physicians from our county and also from Allamakee and Fayette Counties were here. In the evening a banquet was held at the Winneshiek Hotel, at which time there were about twenty-five present, including guests. After the dinner, Dr. Channing G. Smith, president of the state society, gave a very interesting discourse on some of the administrative problems of our society, and Dr. Woodward of Mason City, chairman of the council, spoke briefly on state society activities. Following this, we had an interesting talk by Dr. Glomset on The Nervous Heart, and one by Dr. Peck on Pulmonary Tuberculosis. Both addresses were illustrated with lantern slides.

The doctors up here in our county feel that they owe a great deal of gratitude to Drs. Peck and Glomset for the courtesy they have extended us by coming here repeatedly for a number of years to conduct these heart and lung clinics. They have done this without any selfish motives, because they have received no remuneration and have had the benefit of none of these patients as far as increasing their practices in their own locations. Such men are surely proving their sincerity and should receive only the highest commendation from their colleagues.

A. F. Fritchen, M.D., Sec'y.

Austin Flint-Cedar Valley Society

Some one hundred physicians attended the afternoon session of the Austin Flint-Cedar Valley Medical Society, held in Clear Lake Wednesday, July 15. The program was opened by Dr. Channing G. Smith, of Granger, president of the Iowa State Medical Society, who gave a short talk on State Society Activities, after which H. S. Plummer, M.D., of Rochester, presented a paper on Differential Diagnosis of Hyperthyroid States. W. W. Bowen, M.D., of Fort Dodge, spoke on Enterostomy as a Life-Saving Measure, and F. L. Knowles, M.D., also of Fort Dodge, discussed Flat Feet in Children. The session was concluded with an address by R. B. Gibson, M.D., of Iowa City, on Insulin in Diabetic Management, with Particular Reference to Its Employment in Complications of Diabetes. Newly elected officers for the society are: Dr. Bruce Ensley, of Shell Rock, president; Dr. A. B. Phillips, of Clear Lake, vice president; Dr. C. C. Hall, of Maynard, secretary; and Dr. W. E. Long, of Mason City, treasurer.

Northeastern Iowa Medical Association

Approximately fifty physicians from the four counties of Buchanan, Clayton, Delaware and Fayette, were in attendance at the annual meeting of the Northeastern Iowa Medical Association, which was held in Strawberry Point, Wednesday, June 24. A seven o'clock dinner was served at the Franklin Hotel, after which James F. Weir, M.D., of the Mayo Clinic at Rochester, spoke on Jaundice, Causes and Treatment, and H. C. Hesseltine, M.D., of Iowa City, read a paper, Obstetrics in the General Practice of Medicine.

Upper Des Moines Medical Society

The summer meeting of the Upper Des Moines Medical Society was held in Arnolds Park, Iowa, Thursday, July 9. The morning program of the

all-day session was as follows: The Treatment of Syphilis in General Practice, P. A. O'Leary, M.D., Rochester; Medical Management of Goitre, S. M. Haines, M.D., Rochester; The Injection Treatment of Varicose Veins, C. F. Dixon, M.D., Rochester; The Treatment of Gonorrheal Urethritis in the Male, L. E. Pierson, M.D., Sioux City; and The Relationship of Ophthalmology to Medical Diseases, J. B. Gregg, M.D., Sioux Falls, S. D. The afternoon meeting convened at one-fifteen and the program was opened by F. L. Knowles, M.D., of Fort Dodge, addressing the group on Diagnosis and Treatment of Fractures of the Spine. J. T. Strawn, M.D., of Des Moines, then spoke on The Treatment of the Uncomplicated Cases of Gastric and Duodenal Ulcers, and H. H. Dilley, M.D., also of Des Moines, presented Complications of Gastric and Duodenal Ulcers. Another Des Moines physician, H. C. Bone, M.D., talked on X-Ray Findings in Gastric and Duodenal Ulcers, and E. M. Hammes, M.D., of St. Paul, Minnesota, concluded the scientific program with a paper on Diagnosis of Functional Neurologic Diseases. Motion pictures, with sound, entitled Suspension of the Uterus for Retrodisplacement, were shown by the courtesy of the Research Department of the Petrolagar Laboratories. A six-thirty dinner was served, at which Dr. Channing G. Smith, president of the Iowa State Medical Society, presided as toastmaster. The speaker of the evening was Judge F. F. Faville, of Des Moines.

MISSISSIPPI VALLEY CONFERENCE

The annual joint meeting of the Mississippi Valley conference on Tuberculosis and the Mississippi Valley Sanatorium Association will be held this year at the Lowry Hotel in St. Paul, September 21, 22 and 23.

This double conference gathers together from twelve Mississippi Valley states those medical experts in tuberculosis, public health officials and social workers interested in the anti-tuberculosis movement. The program will consist of three days of intensive study on medical and medico-sociological subjects and on Christmas Seal organization. Among the states participating are Illinois, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, South Dakota, Ohio and Wisconsin.

This year's program is in the hands of J. W. Becker, St. Louis, chairman, Walter J. Marcley, M.D., director of the tuberculosis division, U. S. Veterans' Hospital, Fort Snelling, and E. A. Meyerding, M.D., executive secretary of the Minnesota State Medical Association, and promises to be outstanding among the eighteen previous gatherings of the organization. Dr. Marclay is president and Dr. Meyerding is secretary of the conference.

Tuberculin testing in all its aspects, case finding, vital statistics, the problem of tuberculosis in adolescence and the problem of the under-par child will have consideration at various sessions.

Following is the tentative program of the sanatorium association session:

MONDAY, SEPTEMBER 21

"Tuberculin Testing by Districts in Minnesota," Dr. W. S. Broker, Otter Tail County Sanatorium, Battle Lake, Minn.

"Phrenico-Exeresis in the Treatment of Lung Disease," Dr. Jerome R. Head, Chicago, Ill.

"Increasing Importance of Silicosis," Dr. A. W. Gray, Milwaukee, Wis.

"X-ray Clinic" (To demonstrate the value of serial X-ray films in determining the progress of tuberculosis):
(a) Dr. G. D. Kettelkamp, Robert Koch Hospital, Koch, Mo.
(b) Dr. C. F. Taylor, Kansas State Sanatorium, Norton, Kan.
(c) Dr. Paul D. Crimm, Boehne Hospital, Evansville, Ind.
(d) Dr. W. M. Spears, Oakdale, Iowa.

"Spontaneous Pneumothorax," Dr. Max Biesenthal, Chicago, Ill.

"Endoscopy in the Diagnosis and Treatment of Non-Tuberculous Diseases of the Lungs" (Lantern), Dr. Wm. A. Hudson, Detroit, Mich.

"Conservative vs. Surgical Treatment of Bone Tuberculosis":
"Conservative Treatment," Dr. Robinson Bosworth, Municipal Tuberculosis Sanatorium, Rockford, Ill.
"Surgical Treatment," Dr. Melvin Henderson, Mayo Clinic, Rochester, Minn.

"What the X-ray Shows in Tuberculin Reactors," Dr. L. E. Rigler, University Hospital, Minneapolis, Minn.

"Types of Lesions Noted," Dr. J. A. Myers, Minneapolis, Minn.

"Tuberculosis Treatment Plus the Three Rs," Dr. David A. Stewart, associate professor of medicine, University of Manitoba, and superintendent of the Manitoba Sanatorium, Ninette, Manitoba, Canada.

"The Advantages of Surgical Facilities in a Sanatorium," Dr. Jerome Head, Chicago, Ill.

"Changes in the Last Ten Years Made in the Sanatorium Treatment of Tuberculosis," Dr. Walter J. Marclay, president, Mississippi Valley Conference, and chief of the Tuberculosis Division of the Veterans' Hospital, Fort Snelling, Minn.

TUESDAY, SEPTEMBER 22

"The Need for Medical Social Service Work in Sanatoria," Miss Marguerite A. Ridler, director of Social Service, Glen Lake Sanatorium, Oak Terrace, Minn.

"Interesting Case Reports": Dr. Wm. S. Middleton, associate professor of medicine, University of Wisconsin, Madison, Wis.; Dr. V. V. Norton, Hamilton County Tuberculosis Sanatorium, Cincinnati, Ohio; Dr. F. L. Jennings, Glen Lake Sanatorium, Oak Terrace, Minn.; Dr. R. H. Morgan, Detroit, Mich.

"Tuberculosis in a Rural District," Dr. Edw. J. Simons, Swanville, Minn.

"Principles of Out-Patient Work in a Sanatorium," Dr. Geo. McL. Waldie, Copper County Sanatorium, Houghton, Mich.

"Following up Sanatorium Patients," Dr. Geo. Thomas Palmer, Palmer Sanatorium, Springfield, Ill.

"Does Childhood Tuberculosis Require Hospitalization?"
Proponent—Dr. C. L. Hyde, Springfield Lake Sanatorium, East Akron, Ohio.
Opponent—Dr. C. A. Stewart, associate professor of pediatrics, University of Minnesota, Minneapolis, Minn.

"Is the Sanatorium a Safe Place for Nurses?", Dr. E. S. Mariette, Glen Lake Sanatorium, Oak Terrace, Minn.

"Is a Good History Fifty Per Cent of the Diagnosis in Tuberculosis?" Dr. Oscar Lotz, Wisconsin Anti-Tuberculosis Association, Milwaukee, Wis.

AUXILIARY NEWS

Upper Des Moines Woman's Auxiliary

The Woman's Auxiliary of the Upper Des Moines Medical Society met at the Inn at Okoboji, on July 9. After a delightful luncheon, Mrs. P. G. Grimm, of Spirit Lake, presided at the business meeting. Mrs. Channing Smith, of Granger, president of the State Auxiliary, was present and gave a very interesting and instructive talk. Officers elected for the coming year were Mrs. C. E. Birney, of Estherville, president; Mrs. J. B. Knipe, of Armstrong, vice president, and Mrs. C. G. Nicholson, of Spirit Lake, secretary and treasurer. At the conclusion of the business meeting a boat ride around the lake was enjoyed.

DR. HENDRICKS HEADS WASHINGTON HEALTH UNIT

Announcement has been made that Dr. Hershel L. Hendricks, formerly of Minneapolis, Kansas, has accepted the post as head of the Washington County Health Unit, and is moving with his family to Washington.

INTERESTING NEWS

In Brief

The 1931 legislature in New Hampshire granted authority to municipalities to appropriate money from the general fund to provide a stipend for physicians practicing in sections where the town itself was not large enough to attract a physician. It further provided that a joint appropriation for this purpose could be created by a group of towns and could be made for the support of hospitals, clinics and health centers.

Announcement was made on July 18 that Dr. Charles W. Mayo, son of Dr. Charles H. Mayo, co-founder of the Mayo Clinic at Rochester, had been made a member of the senior surgical staff of the clinic. The younger Dr. Mayo is a graduate of Princeton University, the University of Minnesota and the University of Pennsylvania, and was at one time a student at the State University of Iowa College of Medicine.

During the last session of the legislature, Section 2268 of the Code of 1927 was amended, doing away with compulsory fumigation following contagious illness. The immediate disinfection of all body discharges is stressed since this method has been proved superior to terminal disinfection in the control of these diseases.

Dean Wilbur J. Teeters, of the College of Pharmacy at Iowa City, was recently given a copy of the twenty-sixth edition (1805) of a medical book written by John Wesley, entitled "Methods of Curing Most Diseases." Wesley was both a medical practitioner and a minister of the gospel.

During the campaign for eradication of diphtheria in Lyon County, 1,100 children were given the preventive treatment. A follow-up campaign has just been completed by the Lyon County Medical Society in which 400 children, 27.9 per cent under five years of age, were immunized.

Early in July a hospital was opened in Manchester, Iowa, with Miss Rose Kocher, formerly of Oelwein and West Union, in charge. The new hospital has a bed capacity of six to eight patients and has its own operating facilities.

Since the enrollment in the Medical School at Iowa City is of necessity strictly limited in the number admitted to each class, applications must be filed at once to receive consideration. Preference will be given residents of Iowa.

A recent act of Congress authorizes a merger of the Bureau of Pensions, the National Soldiers' Home and the Veterans Bureau. In Iowa the consolidated bureau will be located in Des Moines, with Dr. F. L. Williams, former regional manager of the Veterans Bureau, in charge.

PERSONAL MENTION

Dr. J. R. Shorey is opening his office in Davenport, at 612 Putnam building, after having spent the past year as a resident staff member of the Milwaukee County General Hospital at Wauwatosa, Wisconsin. Dr. Shorey is a 1930 graduate of the State University of Iowa College of Medicine.

Dr. Charles F. Starr, of Mason City, who has been active in Lions Club affairs for some time has recently been appointed to the international board of directors for the annual convention at Toronto.

Dr. Thomas Egan, who graduated a year ago from Creighton University School of Medicine, has located in Logan for the practice of medicine.

Dr. Zella White Stewart of Iowa City, presented an illustrated talk on "Allergy" at a meeting held in Bloomfield, June 29, which was sponsored by the Business and Professional Women's Club. Among the guests of the club were members of the Davis County Medical Society and their wives.

Dr. Roy W. Tandy, who is locating at Tracy, is the newest addition to the doctors of Marion County. Tracy has been without a physician for some time.

Dr. George E. Hearst of Cedar Falls, is in a hospital recovering from an automobile accident in which he suffered three broken ribs, slight concussion of the brain and a neck injury. Newspaper reports would not indicate that his condition was serious.

Dr. Clifford W. Thomas, for the past four years a member of the staff of the State University College of Medicine, is locating in Forest City where he will be associated with Dr. T. J. Irish. Dr. Irish plans to limit his practice to obstetrics and surgery, while Dr. Thomas takes care of the medical cases.

Dr. James E. Dyson, of Des Moines, has again been named medical director of the Annual Baby Contest held each year in connection with the Iowa State Fair. He will be assisted by thirty-three pediatricians and psychologists in selecting the healthiest baby in Iowa.

Dr. and Mrs. A. J. Meyer are leaving Hawarden, where Dr. Meyer has practiced for nineteen years, and are moving to Los Angeles, California.

Drs. Gordon F. Harkness and John I. Marker, both of Davenport have recently been appointed as physical examiners of applicants for pilot's license, according to announcements received from the aeronautics division of the Department of Commerce.

Dr. Jack Treynor, of Council Bluffs, has recently become associated with Drs. Dean, Howard and Dean, in the eye, ear, nose and throat and bronchoscopic departments of the Council Bluffs Clinic.

Dr. Treynor has announced however that he will continue his consultation practice in pediatrics.

Dr. **John F. Morse**, medical superintendent of the Iowa Sanitarium at Nevada, spoke to a lay group at Perry, Thursday, July 16, on "Degenerative Diseases—Their Prevention."

Dr. **Fred H. Beaumont**, a graduate of the Jefferson Medical College at Philadelphia in 1928, is returning to Council Bluffs to practice medicine there. Dr. Beaumont served a two years' interneship at the Michael Reese Hospital in Chicago, as well as practicing a year in that city.

Dr. **Roy F. Bellaire**, of Sioux City, is in a very serious condition at his home, according to late newspaper reports. He is reported to be suffering from blood poisoning and has been ill since February.

Dr. **Eugene B. Floersch**, formerly of the St. Joseph Hospital staff in Omaha, is to be associated with Drs. J. P. Cogley and C. V. Edwards in Council Bluffs. He will practice internal medicine exclusively.

Dr. **Harold J. Schilling**, of New Hampton, has been honored by being elected president of the American Medical Association of Vienna, Austria. The club is composed of over 150 doctors studying in Vienna. Dr. Schilling plans to return to New Hampton in December.

Dr. **William E. Hay**, formerly of Omaha, has established an office in Avoca. Dr. Hay was graduated from the University of Nebraska College of Medicine in 1930.

Dr. **P. J. Gustin**, of Bedford, has received an appointment as captain in the United States Army Medical Reserve Corps. Dr. Gustin plans to attend the Officers' Training School held at Rochester this fall.

Dr. **W. M. Krigsten** has announced that he will be associated with his brother, Dr. J. M. Krigsten of Sioux City. He is a graduate of the State University of Iowa College of Medicine and interned in Detroit, Michigan, at the Herman Kieffer Children's Hospital and at Harpers General Hospital.

Dr. **E. F. Rambo**, of Stanhope, has been appointed deputy coroner of Hamilton County, according to an announcement made by County Coroner Dr. E. W. Slater of Jewell. This appointment is provided for by a law to that effect which was passed by the recent legislature.

Dr. **H. W. Clasen**, who has been operating a private hospital at Tripoli for the last ten years, has moved to Denison, where he will continue in the practice of medicine.

Dr. **W. B. Dixon** has disposed of his practice and good will in Hawarden to Dr. Thomas J. Glasscock of Finley, North Dakota. Dr. Dixon plans to move to Des Moines and take special work in the Methodist Hospital.

MARRIAGES

The wedding of Miss Margaret Bosworth and Dr. F. K. Burnett took place at the home of the bride's parents in Fremont, Nebraska, July 3. The bride is a graduate nurse, receiving her training in the Methodist Hospital in Omaha. After a month's automobile trip throughout the east, Dr. and Mrs. Burnett will be at home in Clarinda, where Dr. Burnett has been practicing for some time.

Miss Cordelle Niswander, of Iowa City, and Dr. A. E. Putz, of Ossian, were united in marriage at St. Mary's Church, in Iowa City, June 25. Immediately following the ceremony and reception, the young couple left for a motor trip along the eastern sea coast, and will be at home after August 1, in Ossian, where Dr. Putz has just located for the practice of medicine.

Tuesday, June 30, Miss Mildred Weaver, of Pana, Illinois, and Dr. Hale F. Shirley, formerly of Algona, were married at St. Louis, Missouri, where Dr. Shirley has just completed a year's work as resident physician at the Children's Hospital. For the past three years, the bride has been a dietitian at the Children's Hospital at Iowa City. After a northern trip, the couple will be at home in Mason City, where Dr. Shirley will practice pediatrics in the Park Hospital Clinic.

Mrs. Etta Van Voorhis, and Dr. C. W. Burt, both of Valley Junction, were married at the home of Senator O. P. Myers, at Newton, Iowa. Dr. Burt has been practicing in Valley Junction for some time, and he and Mrs. Burt are now at home to their friends, at 536 Eighth Street.

DEATH NOTICES

Beaver, Charles Vernon, formerly of Anita, died at the state hospital in Clarinda, June 25, at the age of 74, death being the result of a stroke of paralysis suffered about a year ago. He was graduated in 1885 from the Northwestern Medical College, St. Joseph, and had long been a member of the Cass County Medical Society.

Pitts, Curtis Duane, died at Maxwell, July 6, at the age of 65. He was graduated in 1891 from the Keokuk Medical College and was a former resident of Dallas and Columbia. At one time he was a member of the Marion County Medical Society.

History of Medicine in Iowa

Edited by the Historical Committee

Dr. William Jepson, Sioux City
Dr. Arthur D. Woods, State Center
Dr. Frank M. Fuller, Keokuk
Dr. Walter L. Bierring, Des Moines
Dr. Norman F. Miller, Iowa City

History of Medicine in Louisa County

J. H. Chittum, M.D., Wapello

On April 24th, 1854, a small group of men held a meeting in Wapello, of great significance to the community. Six pioneer physicians met on that date and organized the Louisa County Medical Society. This was a short time after the State Medical Society was organized. The group present at that time were Drs. J. M. Robertson, Columbus City; J. B. Latta, Grandview; Drs. John Bell, Jr., T. G. Taylor and H. T. Cleaver, Wapello, and J. H. Graham, Morning Sun.

To this small list were soon added most of the physicians then located in the county. These were Drs. Tom Bell, J. F. Grimes, O. E. Deeds, John Mouldoon, F. Tustison and W. S. Grimes of Wapello. Morning Sun adds Drs. D. McCaughn, J. W. Halliday, H. Ochiltree and S. R. Spaulding. Columbus City seemed to furnish the largest number. There were Drs. H. Belknap, John Cleaves, W. M. Clark, B. G. Neal, W. A. Colton, W. S. Robertson, I. C. Browne, A. B. McCandles. Columbus Junction did not have so large a medical population in those days and Drs. D. W. Overholt and G. P. Neal were members. Drs. N. W. Mountain and J. A. Thompson were the members recorded in Letts.

Grandview's additions to the original Dr. Latta were Drs. H. S. Rogers, D. J. Higley and M. W. Lilly. Dr. T. Blackstone was the member from Cairo.

From 1887 to 1900 the county society was not active, but in the latter year another period of activity was inaugurated. A number of contemporary physicians, including the writer, were admitted. These comprised Drs. D. Y. Graham, W. S. McClellan and W. R. Smythe of Morning Sun; J. H. Chittum, E. A. Saylor, J. H. Wallahan, A. M. Rogers, O. G. Messenger, of Wapello; E. C. Rogers F. A. Hubbard, J. W. and C. S. Clegg of Columbus Junction; S. J. Lewis and J. W. Morgan, Columbus City, and Dr. R. C. Ditto of Oakville.

At more recent dates there were added to the membership, Drs. O. W. McGrew and O. A. Kabrick of Grandview; E. R. King and T. E. Eland of Letts; J. W. Pence of Columbus Junction; W. D. Brock of Oakville and L. E. Weber of Wapello.

During the years the membership has been depleted; not only by removals but the Grim Reaper has also been busy. Many have passed on at a youthful age, the more recent ones being Drs. McGrew and Graham. The present membership consists of Dr. O. A. Kabrick, Grandview, president; L. E. Weber, Wapello, secretary, and Drs. M. W. Lilly, D. J. Higley of Grandview; E. R. King, T. E. Eland of Letts; S. J. Lewis, F. A. Hubbard and J. W. Pence of Columbus Junction; W. D. Brock and R. C. Ditto of Oakville; W. R. Smythe of Morning Sun; E. C. Rogers, W. J. Woodruff and J. H. Chittum of Wapello.

In the list of present members will be noticed the name of M. W. Lilly, who joined the society fifty-one years, and D. J. Higley, who joined forty-nine years ago. Much to the pleasure of the younger men, both are still able to be regular in attendance at the monthly meetings.

There were a number of physicians in the county at various periods, who were not affiliated with the county society; but who did yeoman service in conserving the health of the community, of which may be named Drs. C. B. Allen, G. W. Browne, Wm. Blair, T. W. Blacklock, I. P. Crowder, Wm. Darrow, F. L. Darrow, T. E. K. Dihel, J. B. Eads, C. B. Fulton, W. S. Hoyt, W. C. Hummell, L. D. Johnson, J. H. Mewherter, G. S. Morrow, John Overholt, Sr., R. S. Paxton, S. D. Packwood, L. J. Rhea, R. J. Tillmann, J. W. Turner, A. J. Weaver, R. A. Black, L. Wall, B. Kelley, L. Wilmering, F. T. Rucker, M. H. Summers, W. R. Belding, W. F. Boiler, F. J. Epineter, L. Z. Shaw, T. H. Murray, I. E. Huston, D. F. Huston,

J. C. Dodds, R. F. Wykoff, I. A. Rankin, Ora Falls and Grant Giles.

It would give me great pleasure to pay tribute to each of the mentioned members and non-members, but space will not permit. But I must mention that the Louisa County Medical Society has furnished one member of the Iowa state senate, in the person of Dr. Latta, and three teachers in medical schools. The latter were Drs. W. S. Robertson, H. T. Cleaver and J. A. Scroggs.

Then also, the first operation on the stomach of which we have record in America, was performed by one of the original six, assisted by all the others except one. This operation was for the removal of a bar of lead from the stomach of L. W. Bates on January 3, 1855. Dr. John Bell, Jr., was the chief operator and was assisted by Drs. Robertson, Cleaver, Graham and Taylor. This was done in a small house on the bank of Long Creek, on what has for years been known as the S. Dunham farm. The subject of the operation lived long enough to serve a term in the Missouri penitentiary for stealing a horse and the bar of lead reposes in the museum of the State University of Iowa.

It is also stated that the first Caesarean operation of which we have any record in this part of the country, was done by a member of the Louisa County Society, in the person of Dr. B. G. Neal of Columbus Junction.

It has been my pleasure to have met many of those older practitioners though not nearly all of them. Dr. Scroggs was one of my instructors in medical school and Drs. Browne, Thompson, Overholt, Tustison and Grimes were leaders in the county when I settled in the community.

I cannot close without special mention of one who was very widely known throughout the county and who did noble work in the field of medicine for forty-four years. He was of much help to all younger physicians. In his associations, he would go to any length to aid another physician, as well as any patient in his care. I refer to the late Dr. W. S. Grimes.

While the physicians mentioned above as well as others, whose names I do not have, always strived to improve the general health of the community in the way of preventing disease, as well as in curing the sick, they only acted individually. There was no concerted action in preventive work until about 1920, when the Louisa County Public Health Association was organized, the purpose being to secure cooperation in the prevention of disease. All residents of the county have become more or less acquainted with this organization in connection with the Christmas seal sales.

Iowa Academy of Sciences 1875-1931

Physicians as Charter Members

In the July number of the Iowa Journal of History and Politics, appeared an interesting review of the organization and early history of the Iowa Academy of Sciences.

In connection with the organization meeting the following is noted: "On August 27, 1875, a meeting of persons interested in the organization of a scientific association for the state of Iowa met at the State University. This group consisted of C. E. Bessey, D. S. Fairchild and J. K. Macomber of Ames; Gustavus Hinrichs, W. C. Preston and E. F. Clapp of Iowa City; W. D. Middleton of Davenport, and A. G. Field of Des Moines. These men, together with Samuel Calvin of Iowa City, Asa Horr of Dubuque, C. C. Parry of Davenport, P. J. Farnsworth of Clinton and J. E. Todd of Tabor, who were not present but had previously expressed their desire to join such an organization, became the charter members of the Iowa Academy of Sciences."

It will be noted that the following Iowa physicians were listed as charter members: Doctors D. S. Fairchild, W. C. Preston, E. F. Clapp, W. D. Middleton, A. G. Field and P. J. Farnsworth.

It will be of interest to quote further from the records of the first meeting: "The constitution which was adopted at this time set forth as the purpose of the Academy 'the promotion of science, more particularly that pertaining to the state of Iowa.' A president, vice president and a secretary-treasurer, who were jointly to constitute a board of trustees, were to be elected annually. Fellows in the organization were to be limited in number to thirty and to 'such persons as have done good scientific work.' Provision was made that the Academy should hold at least two meetings a year —one in the spring at Iowa City, and one in the fall at such other place as might be designated. Election of officers resulted in the naming of C. E. Bessey, as president, W. D. Middleton, as vice president, and W. C. Preston, as secretary-treasurer.

"Plans were made to hold the next meeting in Des Moines on the evening preceding the regular

meeting of the State Medical Society in February, 1876. It was agreed that at this Des Moines meeting each charter member should be allowed to present the name of one candidate for membership. Recommendations and reasons based upon the scientific work of the candidate were to be forwarded to the secretary-treasurer before the date of the meeting.

"In accordance with the plans previously made, the Academy met in the office of Dr. A. G. Field in Des Moines, on the evening of January 25, 1876. This session is referred to in the reports as the first semi-annual meeting of the Academy. Only five members — Hinrichs, Middleton, Farnsworth, Fairchild and Field—were present. In the absence of President Bessey and Secretary Preston, Doctor Middleton, vice president of the Academy, presided, and Doctor Fairchild was elected secretary pro tem. During the business session articles of incorporation were presented and approved, and five candidates—D. S. Sheldon and R. J. Farquharson of Davenport, C. M. Hobby of Wilton, G. C. Carpenter of Indianola and F. M. Witter of Muscatine—were nominated for membership in the Academy." Thus, at the first semi-annual meeting, two additional physicians, Dr. R. J. Farquharson of Davenport and Dr. C. M. Hobby (later of Iowa City), were elected to membership.

It is significant that the leading physicians of that early period should be interested in the formation of the Iowa Academy of Sciences, and it was furthermore a distinct recognition by the Academy of their scientific attainments.

It will be recalled that Doctors W. D. Middleton, E. F. Clapp, P. J. Farnsworth, C. M. Hobby and W. C. Preston were associated with the first medical faculty in Iowa City. Dr. D. S. Fairchild was the first professor of comparative pathology in the College of Veterinary Medicine at Ames, and later a teacher of pathology, clinical medicine, and surgery in the Drake University Medical School. Dr. A. G. Field of Des Moines was distinguished for his pioneer work in microscopy, and the study of the biologic sciences as related to medicine.

It should arouse a feeling of general professional pride to know that the medical leaders of more than a half century ago helped to nurture the spirit of true science, and thus preserved for Iowa medicine one of its prized traditions.

GEORGE E. SMITH, M.D.
1853-1931

WHEREAS, by death we have recently lost a worthy colaborer, Dr. George E. Smith. We bow in silence to the Will of the Infinite in calling him to a better life, after fifty years of hard service for his fellowmen. It may truly be said that Dr. Smith specialized as a "family physician." His long years of such service bear volumes of testimony from his patients as to his loyalty and sacrifice in service among them.

Therefore, Be It Resolved, That the Henry County Medical Society has sustained the loss of a splendid distinguished member; the family, the loss of a kind and gracious father, and a large community has lost a great friend and counselor, who responded to all calls, both charitable or professional, promptly and liberally.

Be It Further Resolved, That a copy of these resolutions be sent the family, and that these resolutions be spread upon the records of the society, and a copy to the Iowa State Medical Journal so that it may be known that all have lost an able, friendly, stalwart and loving friend.

(Signed) O. A. Geeseka
W. S. Lessenger
J. W. Laird

A BUREAU OF PUBLICITY

The Indiana State Medical Association maintains a Bureau of Publicity of three members who meet regularly. It is the purpose of this bureau to secure and spread news releases to lay persons, to provide speakers for professional and lay meetings; and to answering inquiries from the laity on medical subjects.

THE NEW SQUIBB BUILDING



Nearly seventy-five years ago, Dr. E. R. Squibb founded a modest pharmaceutical laboratory which was destined to become the modern institution of E. R. Squibb & Sons. Through each succeeding year the business has grown in size because it has grown in service.

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THE JOURNAL BOOK SHELF

BOOKS RECEIVED

ANNUAL REPRINT OF THE REPORTS of the Council on Pharmacy and Chemistry of the American Medical Association for 1930—Chicago, American Medical Association, 1931. —Price, $1.00.

*CANCER—Its Origin, Its Development and Its Self-Perpetuation —The Therapy of Operable and Inoperable Cancer in the Light of a Systemic Conception of Malignancy.—A Research by Willy Meyer, M.D.—Paul B. Hoeber, Inc., New York, 1931. —Price, $7.50.

CHEMISTRY FOR NURSES—A Combined Text and Laboratory Manual—By Harry C. Biddle, A.M., Instructor in Chemistry, School of Nursing, Western Reserve University.—336 pages with 74 illustrations.—F. A. Davis Company, Philadelphia, 1931.—Price, $2.75.

CLINICAL DIAGNOSIS BY LABORATORY METHODS—A Working Manual of Clinical Pathology by James Campbell Todd., Ph.B., M.D., late Professor of Clinical Pathology, University of Minnesota (The Mayo Foundation). Seventh Edition, thoroughly revised. 765 pages with 347 illustrations. W. B. Saunders Company, Philadelphia and London, 1931. Price, $6.00.

*THE DIAGNOSIS AND TREATMENT OF BRAIN TUMORS—By Ernest Sachs, Professor of Clinical Neurologic Surgery, Washington University. With 381 pages and 224 illustrations including ten in colors. C. V. Mosby Co., St. Louis, 1931. Price, $10.00.

*DIAGNOSTIC METHODS AND INTERPRETATIONS IN INTERNAL MEDICINE—By Samuel A. Loewenberg, M.D., F.A.C.P., Associate Professor of Medicine, Jefferson Medical College. Second revised edition. 1032 pages with 547 illustrations; some in colors. F. A. Davis Company, Philadelphia, 1931. Price, $10.00.

*HEALTH ON THE FARM AND IN THE VILLAGE—By C.-E. A. Winslow, Dr. P.H., Professor of Public Health, Yale School of Medicine. 281 pages, illustrated. The Macmillan Company, New York, 1931. Price, $1.00.

*HEART DISEASE—By Paul Dudley White, M.D., Instructor in Medicine, Harvard Medical School. 931 pages with 119 illustrations. The MacMillan Company, New York, 1931. Price, $12.00.

NEW AND NONOFFICIAL REMEDIES, 1931—Containing descriptions of the articles standing accepted by the Council on Pharmacy and Chemistry of the American Medical Association on Jan. 1, 1931. Cloth. Price, postpaid, $1.50. Pp. 481+LVI. Chicago: American Medical Association. 1931.

*NOGUCHI—(Biography) By Gustav Eckstein. Harper & Brothers, New York and London, 1931.

*PRACTICAL X-RAY TREATMENT—By Arthur W. Erskine, M.D. 116 pages with over 40 illustrations and charts. Bruce Publishing Company, St. Paul, 1931. Price, $3.50.

*SELECTIONS FROM THE PAPERS and Speeches of John Chalmers Da Costa, M.D., LL.D.—By Samuel D. Gross, Professor of Surgery, Jefferson Medical College, Philadelphia. 440 pages. W. B. Saunders Company, Philadelphia and London, 1931. Price, cloth, $6.50.

*THE TREATMENT OF EPILEPSY—By Fritz B. Talbot, M.D., Clinical Professor of Pediatrics, Harvard University Medical School. 226 pages. First Edition. MacMillan and Company, New York, 1930. Price, $4.00.

USEFUL DRUGS—A List of Drugs Selected to Supply the Demand for a Less Extensive Materia Medica with a Brief Discussion of their Actions, Uses and Dosage.—Prepared under the Direction and Supervision of the Council on Pharmacy and Chemistry of the American Medical Association.—Edited by Robert A. Hatcher, Ph. M., Sc. D., M.D. and Cary Eggleston, M.D.—Eighth Edition.—Published by American Medical Association.

**Review appears in this issue.*

BOOK REVIEWS

CANCER

Its Origin, Its Development and Its Self-Perpetuation. The Therapy of Operable and Inoperable Cancer in the Light of a Systemic Conception of Malignancy. A Research by Willy Meyer, M.D. Paul B. Hoeber, Inc., New York, 1931. Price, $7.50.

This volume is the result of an extensive research conducted by the author with the assistance of his brother over a period of ten years. It is avowedly the result of a comprehensive review of the literature and does not reflect personal observations or experimental research conducted by the author. It is unique for this reason in its approach and, as a result of this method of study, the conception which the author has devolved regarding the etiology of cancer is unusual.

In presenting his theory Dr. Meyer assumes first that a predisposition to cancer, either acquired or inherited must be present, and second, that there must be a chronic irritation, either systemic or local. It is the author's belief that this theory of predisposition or inheritance plus irritation adequately explains the observed phenomena of cancer formation.

It is of special interest to note that the author stresses the chemical reaction of body tissues and fluids under the heading of irritants, an observation which, if correct, certainly suggests a careful control of body reaction in the treatment of this malady. No recognition is given to the theories which have been advanced upon a basis of a specific microörganism or protozoön as the author believes the presence of these living bodies in human tissue has no bearing other than that of producing a chronic irritation.

He states in Part II, "The confirmed observation that malignancy can develop only in the presence of alkalosis would seem to make acidosis appear as an obvious remedy." He cites case reports to strengthen this hypothesis and urges this treatment in inoperable malignancy and as an adjunct to surgery in operable cases.

The volume is written in a fascinating style and reveals not only a tremendous amount of research of the existing literature but also a very thoughtful attempt to bring from this collection of scattered facts a workable, reasonable theory of cancer formation. To every physician, regardless of the scope of his particular specialty, the volume will be of tremendous interest and, because of its pleasant literary style, will be read with continued interest to the last page.

THE DIAGNOSIS AND TREATMENT OF BRAIN TUMORS

By Ernest Sachs, Professor of Clinical Neurologic Surgery, Washington University. With 381 pages and 224 illustrations including ten in colors. C. V. Mosby Co., St. Louis, 1931. Price, $10.00.

This volume fills a long felt want in the literature on the nervous system. Although there are volumes on certain phases of neurologic surgery, this book covers the entire management of brain tumors.

It is replete with excellent illustrations and instructive case histories but is somewhat lacking in operative technic. However, like all pioneers, it blazes a trail and proves an excellent guide for the practitioner. W.A.

DIAGNOSTIC METHODS AND INTERPRETATIONS IN INTERNAL MEDICINE

By Samuel A. Loewenberg, M.D., F.A.C.P., Associate Professor of Medicine, Jefferson Medical College. Second revised edition. 1032 pages with 547 illustrations; some in colors. F. A. Davis Company, Philadelphia, 1931. Price, $10.00.

It is most significant that this book is now in its second edition, although the first edition was printed in 1929. The fact that the first edition went through two printings further indicates the very favorable reception accorded this valuable treatise.

In this new second edition the author has carefully revised the text, making such additions as have been felt necessary to bring the book entirely up to date.

The book is intended for the use of the student and general practitioner who wishes to perfect his methods of diagnosis and more accurately appraise the physical findings. The treatise covers in detail history taking and the methods of complete examination. In other chapters he discusses by systems various diseased conditions which may be encountered, briefly presenting the abnormal physiology, and stressing in detail the physical findings and symptomatology. In the closing chapters industrial examinations, life insurance examinations, periodic health examinations and malingering receive specific attention.

The author has made use of numerous and well chosen illustrations and diagrams, which add much to the clearness of the text. A paragraphic style has been employed throughout, which, coupled with a comprehensive index, readily adapts the book for reference use. The volume is complete, thorough and accurate.

HEART DISEASE

By Paul Dudley White, M.D., Instructor in Medicine, Harvard Medical School. 931 pages with 119 illustrations. The MacMillan Company, New York, 1931. Price, $12.00.

The present volume is precisely what one would expect from an author of Paul D. White's ability, one who has made so many significant original contributions to cardiology, and who also has had such extensive clinical experience. The new student of cardiology will find in this treatise a complete dissertation of the present day knowledge of the pathology of the heart. It is clearly written and well arranged, particularly for the medical student. The older student however, will be tempted to wish that some practical means will be devised in the future, whereby the older, often repeated, knowledge will be separated from the newer and less crystallized facts.

Dr. White's book has a large number of fascinating features: the publishers have done their work exceedingly well, it is printed on good paper and in large type, the illustrations are clear and distinct, and it is remarkably free from typographical errors; the arrangement of the book into four parts, the first dealing with the examination of the patient, the second with the incidence and types of heart disease, the third with structural abnormalities, and the fourth with disorders of function, is attractive and logical.

The inclusion into the book of either verbatim excerpts or good translations of publications bringing out new cardinal facts concerning heart disease such as Fallot's article on de la maladie bleue, Aschoff's description of Aschoff's nodules, and Herrick's article on coronary thrombosis is very pleasing and unique. The book is markedly free from unsupported pet theories and the frank labeling of the gaps in our knowledge is both refreshing and stimulating. In a word, the present volume is entirely worthy of such an eminent and sane cardiologist as Dr. Paul D. White. If one could only persuade the author to add from time to time some supplements containing new advances, one's library on cardiology would be very satisfactory indeed.

D. J. G.

NOGUCHI

(Biography) By Gustav Eckstein. Harper & Brothers, New York and London, 1931.

This volume records in a most fascinating style the life history of one of the most outstanding of modern bacteriologists. The author has begun his biography in the quaint and almost primitive setting of a Japanese farming community. In orderly and colorful fashion he has traced the history of this farmer boy through the accident, which shaped the course of his life; his grammar school education; his early medical training as a pharmacy boy; his medical school training in the schools of Tokyo; his immigration to America and association with Professor Simon Flexner and Dr. S. Weir Mitchell; his graduate work in Copenhagen and his brilliant research in the Rockefeller Institute up to the time of his tragic death.

That the portrayal of this character has been done with sympathy and understanding is reflected in the accounts of his lowly origin and his sprees of dissipation followed by remorse and intense scientific research and study. His tremendous ability to tirelessly pursue a line of investigation, crowned as

they so often were by discoveries of tremendous importance to mankind, exemplify the life not only of a scientist but also that of an artist.

This biography is the outstanding contribution of its sort to medical literature for the year and I little doubt that it will be reckoned among the outstanding biographies for all time.

PRACTICAL X-RAY TREATMENT

By Arthur W. Erskine, M.D. 116 pages with over 40 illustrations and charts. Bruce Publishing Company, St. Paul, 1931. Price, $3.50.

This concise textbook, written by a practical roentgenologist qualified by a large experience in radiation therapy and a noteworthy interest in research problems, should be studied by everyone doing X-ray therapy. Without being elemental, the author first outlines the essential physical facts of X-ray, together with protective measures for patient and operator. The various measuring instruments are described. While the author believes them necessary, he realizes that their use will not be widespread for some time and he therefore outlines in detail his three technics for radiation. From such technics, one can construct actual time values for treatment, after determining the minimum erythema dose for his own equipment.

An unfiltered technic is omitted because, as the author mentions, unfiltered radiation from various tubes varies more than filtered radiation, and by means of a table he shows that it is possible to give an overdose of almost 100 per cent in changing tubes with no filter used. A high voltage technic is mentioned but in the author's mind there is no peculiar advantage in short wave-length X-rays aside from their increased penetrative power.

The final three chapters are devoted to practical therapeusis, the author describing in proper detail his treatment of skin diseases, non-malignant and malignant conditions. He is altogether conservative in his statements as to the results to be expected from radiation therapy, a fact that makes one appreciate this text as a noteworthy contribution.

H.D.

SELECTIONS FROM THE PAPERS AND SPEECHES OF JOHN CHALMERS DA COSTA, M.D., LL.D.

By Samuel D. Gross, Professor of Surgery, Jefferson Medical College, Philadelphia. 440 pages. W. B. Saunders Company, Philadelphia and London, 1931. Price, cloth, $6.50.

It should be of more than passing interest to every physician to review the lives and works of the outstanding pioneers in medical practice. Few American physicians have left a more indelible stamp upon the theory and practice of medicine than the late John Chalmers DaCosta, the eminent professor of anatomy and surgery at Jefferson Medical College, who through a long lifetime contributed hundreds of articles of scientific merit, edited several books and delivered many noteworthy addresses. To his former students DaCosta is remembered as a physician of the old school, a patient teacher and a brilliant surgeon. He meant more than this to many since his kindly advice prepared many a young physician to successfully meet the difficulties and problems encountered in his early years of medical practice.

In this collection of papers and addresses twenty-one essays are presented, essays sparkling with the humor so characteristic of DaCosta, rich in historical and biographical background and embellished with the philosophy that comes with long and thoughtful observation.

Of the papers presented, perhaps the most interesting are: "Dickens' Doctors," "Medical Paris During the Reign of Louis Philippe," "Character Sketch of Samuel W. Gross," "Baron Larrey," and reminiscences of "The Old Blockley Hospital." Most useful, perhaps, to the physician in his early years of practice may be mentioned his memorable essay entitled "Behind the Office Doors." In this essay sound reasoning is combined with sterling advice, which carries cheer and encouragement in every paragraph.

The entire volume is one of the most pleasing which has come to our attention during the year.

THE TREATMENT OF EPILEPSY

By Fritz B. Talbot, M.D., Clinical Professor of Pediatrics, Harvard University Medical School. 226 pages. First Edition. MacMillan and Company, New York, 1930. Price, $4.00.

The voluminous literature on this subject is handled in a concise and critical manner by the author in the first part.

The second part dwells minutely upon the chemistry, physiology and clinical phases of the ketogenic diet in epilepsy. The chapter on education is exceptionally valuable to the practitioner and parent. This volume appearing on the dawn of the dehydration treatment in epilepsy precludes adequate discussion on this phase of therapy but it is hoped that the second edition will contain a more lengthy discourse on this subject.

W.A.

RURAL VS. URBAN HEALTH

In a recent report of a comparative study of the health of 100,000 adult white males residing in rural sections and as many in urban centers made by the research division of the Milbank Memorial Fund of New York City, it was found that in sight, hearing, respiratory diseases, skin diseases, "nervousness" and diseases of the cardio-vacular system, the low percentage was uniformly in favor of the rural dweller. The only classification in which the agricultural worker fell behind the business, professional and skilled worker group (which made up the urban classification) was dentistry.

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INDICATIONS FOR THE SIMPLE MASTOID OPERATION*

GEORGE W. MACKENZIE, M.D., Philadelphia

After looking over the field of subjects suitable for presentation before a body composed mostly of general practitioners it was felt that the one covered by the title should, from the standpoint of vital importance, answer the purpose.

The simple mastoid operation is that particular operation which aims at the removal of all involved mastoid cells and drainage of the antrum, and nothing more; hence we speak of it as mastoidectomy and antrotomy. The opinion of the best otologists is that the more acute the involvement, the more the simple mastoid operation is indicated in preference to the radical method, which is reserved for the chronic cases.

The old Politzer school limited the simple mastoid operation to acute cases and then went on to classify as acute those cases lasting for as long as ten months. After ten months a case was considered a chronic one, calling for one of the radical operations.

The writer is not sufficiently orthodox to judge the kind of operation he will perform by the number of months an ear has been discharging; he decides rather by the character and the extent of the pathologic changes in the middle ear and mastoid, as determined from clinical and laboratory studies. When in doubt, he prefers to play safe and selects the more radical method. Since 1907 he has become convinced that more lives are lost in surgical practice from not going far enough than from going too far.

A simple mastoid operation as one surgeon performs it is an entirely different operation from that performed by another. When an otologist fails to obtain the desired results following an operation, or the case goes bad, it is almost invariably found that there has been an error of omission in that he failed to reach certain, apparently out of the way, cells that might have been cleaned up easily had he been a little more familiar with his anatomy and less fearful at the time of the operation.

The simple mastoid operation is indicated in preference to the radical when the otologist is convinced from his diagnosis that a well performed simple operation will suffice to eliminate the suppurative field or at least expose it sufficiently to allow nature to bring about a permanent cure.

The indications for the simple mastoid operation are, briefly, those symptoms and signs produced by the extension of the suppurative process beyond the limits of the mucous membrane lining of the middle ear cavity. This extension may be along the preformed way (aditus ad antrum) toward the mastoid spaces posteriorly or in some other direction to be referred to later. However, no matter in which direction the suppuration may extend certain symptoms and signs arise that are common to all. They are:

I. History of acute middle ear suppuration. The most frequent history is that of earache and slight fever occurring in the course of a cold (rhinitis or rhinopharyngitis), rarely a tonsillitis. The patient will probably state that after several days of earache the "drum broke," followed by a discharge from the ear with relief of symptoms for a while, with a later recurrence even more severe than the original. In some cases the history suggests a steady progression of symptoms from the start without the usual remission.

II. Otoscopic findings of acute middle ear suppuration with more or less free purulent or mucopurulent discharge showing in the external auditory canal, which when cleaned away permits a view of the drum membrane with a perforation apparently too small to allow of free drainage. Occasionally the secretion is thin and can be seen issuing through the perforation with pulsations; in fact, the whole drum-head and the contents of the tympanic cavity appear to be pulsating.

III. Moderate fever; the temperature ranging from 99.6° to 101° after it had previously come to normal and remained normal for a while following spontaneous rupture or a paracentesis of the

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drum-head. The higher the temperature, the greater the probability of further complications, except in the case of an abscess of the brain, when the temperature may be relatively low or entirely normal.

IV. Pain in and behind the ear. Earache is a symptom that is common to all complications of middle ear suppuration no matter where the complication may occur.

V. Tenderness over the mastoid. This tenderness seems to be deep-seated and elicited by firm pressure, or better still by percussion with the finger. It may be more pronounced just over the antrum, the mastoid tip or posteriorly in the region of the emissary.

VI. Malaise; general feeling of physical depression including slight headache, usually unilateral; listlessness, restlessness, pallor of the face; in fact, the facial expression of a really sick individual. The cause of this group of symptoms is perhaps nothing more than the absorption of toxic products generated in the mastoid.

VII. Change in the quantity of the aural discharge. It occasionally happens that the flow is increased, indicating an increase in the size of the suppurative area, as would be expected when a suppuration previously limited to the middle ear cavity had suddenly expanded to include the mucous membrane lining of the mastoid cells. On the other hand, a change in the opposite direction may occur; that is a moderately free discharge diminishes suddenly without corresponding improvement otherwise.

VIII. Retro-auricular swelling. This, when present, is very characteristic. Because of the marked swelling due to infiltration of the periosteum and soft tissues overlying it, the pinna becomes displaced outward, forward and downward. This is the classic textbook picture of mastoiditis with an external abscess formation and a fistula of the bony cortex which when left to itself eventually terminates in a breaking down of the soft parts, with spontaneous drainage.

There is another form of swelling over the mastoid which could quite as well be represented as a separate symptom if it were not for the fact that left to itself it would very likely reach the same stage as that just described. It is due to a swelling of the periosteum so slight as to avoid detection by inspection alone. It can be elicited by gentle finger palpation. Standing behind the patient with the tips of the fingers palpating on the two sides simultaneously it is possible to detect the slightest thickening and diminution of mobility of the periosteum and soft parts overlying the mastoid process if they are involved. This symptom was first pointed out by Alexander of Vienna 25 years ago and has proved of value on many occasions since that time. When present it is quite as valuable an indication for operation as the more evident swelling.

IX. Sagging of the posterior superior wall of the osseous canal deep in toward the tympanic cavity. This sign when present is very characteristic of mastoid involvement. This deeper part of the canal is in close proximity to the antrum, which is the first of the mastoid cells to be formed in the normal process of pneumatization, hence it is the most constant and frequently the largest. The shortest route to this cell would be by a puncture made in the posterior superior wall of the external auditory canal. In many cases the separating bone is but a few millimeters in thickness. Because of this anatomic relationship it can readily be understood why in the presence of a suppuration in the mastoid antrum there occurs so often a periostitis of the osseous canal, the swelling from which produces the classic sagging of this wall with resultant narrowing of the canal. Occasionally in chronic cases an actual fistula occurs in this location.

X. Blood count characteristic of a heavy acute infection, with a slight to moderate diminution in the number of red cells. A marked reduction indicates an infection from the hemolytic streptococcus. The white cell count is increased to 12,000 or more, but usually less than 17,000. A higher count is suggestive of one of the more severe intracranial complications. The polymorphonuclear cell count is increased to 80 per cent or even as high as 87 per cent with a proportionate decrease in the other forms of white cells.

XI. Positive X-ray findings of mastoid disease. Since the value of an X-ray diagnosis is dependent upon the technic of the roentgenologist and his interpretation of the films, the writer has come to depend upon him entirely. However, he expects the roentgenologist to point out to him the details in a manner sufficiently clear for comprehension.

XII. The Weber-Schwabach paradox. The writer has come to look upon this sign as the most reliable of all. Briefly, it is an inconsistency in the Weber and the Schwabach test findings which ought to be understood easily by one familiar with functional hearing tests made with tuning forks.

The Schwabach test is a comparison of the patient's bone conduction on the mastoid with that of the normal hearing individual. It is improved in the presence of obstructive deafness, for instance, from middle ear suppuration. For this same reason when a fork is placed on the midline

of the skull the sound is referred to the affected side. In other words, in the Weber test, it is lateralized toward the ear with the middle ear suppuration. If later on the mastoid becomes involved and the cells filled with pus and granulations, in the Weber, though, it continues to be strongly lateralized toward the side of the ear involved, the tuning fork is not heard so well as in the Schwabach test through the mastoid because the pus and granulations in the mastoid cells impair the conductivity of the sound waves.

The twelve indications for the simple mastoid operation just referred to are nothing more nor less than the symptoms and signs of mastoid empyema. It is not necessary to wait until all of these are present in a given case before proceeding to a mastoid operation. In fact, one is safe in deciding to operate in the presence of but 35 per cent of these indications.

Let us review these symptoms and signs of mastoiditis in the order in which they have been presented, for the purpose of determining their relative values:

I. The history is not entirely dependable, for some of the worst cases we come across do not present a history of middle ear suppuration. Recently a child two and one-half years old, was operated on for mastoiditis and complicating jugular bulb thrombosis, although the history was very vague. The infecting organism in this case was the Streptococcus mucosus capsulatis. This infection is very insidious in its development and the resulting earache may be so slight as frequently to be overlooked.

Again, there is a recurring form of middle ear suppuration which runs an atypical course in that it is so mild that it fails to reach the stage of perforation. It is never a really painful ear and does its greatest damage during a recurrence several weeks after the initial attack, when a fatality is sometimes recorded.

II. As to the otoscopic findings of acute middle ear suppuration, they are no more dependable than the history. There are atypical cases which frequently go on to a fatal termination without any apparent visible changes in the otoscopic picture recognizable to the tyro. The experienced otologist, however, is able to discern a peculiar dullness of the drum-head, together with a narrowed appearance of the hammer handle, and a lack of the usual redness and bulging seen in the more frank cases.

III. Fever of moderate degree is a comparatively common symptom. Every case of fever associated with middle ear inflammation does not necessarily indicate mastoiditis, for it may be due to something outside the ear. Thus the symptom becomes one of merely relative value and that only when taken in conjunction with other symptoms and signs.

IV. Pain in and behind the ear is a symptom of considerable importance, but not altogether infallible. When present and combined with VI and IX or with X as listed above, one is warranted in operating upon the mastoid.

V. Tenderness over the mastoid is a symptom of only relative importance. When present it is very suggestive of mastoiditis, but its absence should not be considered a negative sign. We must not confuse the tenderness over the mastoid caused by an external periostitis secondary to *bona fide* mastoid empyema with that tenderness found in an inflamed, swollen, retro-auricular lymph gland secondary to a scalp infection. If we bear in mind the fact that the periosteal swelling from mastoid disease is diffuse in character, while that of the glandular involvement is circumscribed, it will help us materially in the differentiation.

VI. Malaise is a symptom group of considerable value as an indication for operation on the mastoid, when found coexistent with symptoms IV and IX, or other equally important signs, but considered alone it is of relative value only. Before accepting general malaise as an indication of mastoid involvement, intercurrent febrile diseases must be excluded. The writer recalls several cases in which these general symptoms, at first thought to be of toxic origin from the mastoid, eventually proved to be due to something else. It seems as though an attack of influenza is especially prone to develop at a critical time like this and mislead us, but other more important signs will generally straighten us out.

VII. Change in the quantity of the aural discharge is a symptom of importance pointing toward extension of the infection beyond the normal confines of the middle ear cavity. In the case of sudden diminution in the amount of the discharge with a general aggravation of other symptoms, a complication is indicated more often in the mastoid spaces, but not necessarily so, for in a few instances it means extension in some other direction by way of a non-preformed route.

VIII. Retro-auricular swelling, it would seem, is a symptom of mastoiditis sufficiently clear to be unmistakable, but this is not so. At least three cases can be recalled in which this picture, considered so classic for mastoiditis, was the result of a severe otitis externa. One case was very striking. The patient was an Italian child who had suffered an earache from a boil. The father

instilled omega oil and cayenne pepper, the effect of which was to produce a very severe dermatitis. As a result the canal was closed almost completely, the pain became very severe and the ear stood out from the head precisely as it does in the textbook picture of mastoiditis. No operation was necessary and the patient recovered promptly under conservative treatment.

IX. Sagging of the superior-posterior wall of the osseous canal affords an important indication for operation on the mastoid. There is no other pathologic condition one can think of as producing this sign except a periostitis of the external anterior wall of the mastoid antrum. Furunculosis of the external auditory canal occurs only where there are hair follicles and these are not found in the osseous canal. Speaking of this differentiation, we must bear in mind that infants have very shallow osseous canals. A boil may develop in the canal down near the drum-head with resultant swelling that might easily be misinterpreted for the periosteal swelling of mastoiditis by one not familiar with the anatomy. Patients have been operated upon for mastoiditis when in reality they had nothing more than furunculosis of the canal; all because of the lack of knowledge of the anatomy of the external auditory canal at different ages.

X. The blood count alone is of value in proportion to our ability to exclude the presence of other infections capable of producing the same blood picture and the inclusion of other symptoms of mastoid involvement, especially IV, VI and IX.

XI. The indication for operation from the X-ray angle is dependent largely upon the skill of the X-ray specialist, but even here it is found that the roentgenologist frequently wants to know something about the history of the case. The writer has come to accept the opinion of his particular roentgenologist as approaching 95 per cent accuracy. This is far in excess of what other otologists are willing to concede the average roentgenologist. Every case does not call for an operation, but when the stage of exudation has been reached it is safer to operate upon the mastoid than not. Operation is surely indicated when the trabeculae show signs of disintegration.

XII. The Weber-Schwabach paradox comes nearest to being an infallible sign of mastoiditis, not because it happens to be the writer's own "baby," but rather because it has not failed him in the last fourteen years. Whether it will fail him or not at some future time remains to be proved. A combination of symptoms XI and XII is surely sufficient indication, in the judgment of the writer, for opening the mastoid.

May I repeat that the indications for the simple mastoid operation thus far presented include nothing more than the symptoms and signs of empyema of the mastoid cells, which is the most frequent complication of middle ear suppuration. This statement carries with it the inference that there must be other complications of middle ear suppuration calling for a mastoid operation. These other complications are determined by (a) certain inherent anatomic variations; (b) anatomic variations secondary to a previous pathologic process (exudative catarrh); (c) dyscrasias; (d) possibly, too, the character of the infecting microörganism.

As to the anatomic variations, there is to be considered first of all the thickness of the external cortex of the mastoid. If it happens to be unusually thick it acts as a barrier to the pathologic softening process whereby external drainage is effected. The more resistant the cortex, the longer the suppuration is prone to last and the greater is the risk of the abscess in the middle ear and mastoid breaking through one of the other walls. The destructive process may extend:

(1) Posteriorly toward the posterior cranial fossa, resulting in the involvement of the sigmoid sinus or the cerebellum.

(2) Superiorly through the tegmen tympani or antra into the middle cranial fossa, involving the membranes covering the temporal lobe of the brain and resulting in meningitis, circumscribed or diffuse; or involving the brain substance itself and resulting in brain abscess.

(3) Medianward by way of definitely preformed routes (oval and round windows) or nonpreformed routes; that is, by the pathologically softened inner wall of the middle ear into the inner ear, resulting in labyrinthitis.

(4) Medianward also through the bony facial canal, resulting in involvement of the facial nerve; in some cases, favored by an already existing dehiscence of the facial canal.

(5) Inferiorly through the floor of the middle ear cavity toward the jugular fossa with resulting thrombophlebitis beginning in the jugular bulb.

All five of these atypical extensions of middle ear infections are favored by a thick external cortex, as pointed out above, but the particular direction of the extension is determined by the comparative thinness of the different walls of the tympanic cavity. For instance, if the inner wall is thinner and less resistant than any other wall, all other things being equal, the extension is most likely to be inward toward the inner ear rather

than superiorly toward the middle cranial fossa. If the superior wall is the thinnest and the least resistant, the extension will most probably be toward the middle cranial fossa, particularly if at the same time there happens to exist a dehiscence from lack of closure of the petrosquamous suture.

As to the anatomic variations secondary to exudative catarrh, they exist in the form of adhesive bands resulting from the organization of exudate following acute exudative (secretory) catarrh. They may occur in any part of the middle ear cavity. The favorite sites are (1) pretympanic, where they seem to interfere particularly with the hearing function; (2) in the aditus ad antrum, where they interfere with the drainage and ventilation of the antrum, thereby acting as a predisposing factor in the causation of mastoiditis; (3) in the narrowed space between the meso- and epi-tympanum predisposing to chronic attic suppuration.

As to the dyscrasias, they surely play a part in modifying the behavior of suppurative otitis media. In other words, they help to determine the nature of the complication. The dyscrasias with which the writer has had the most experience have been syphilis, tuberculosis, diabetes and pronounced focal infection. There is a tendency for all infections to behave atypically in the presence of one of these dyscrasias. The extension of middle ear suppuration in the presence of a dyscrasia is more in the direction of a non-preformed than one of the preformed routes, probably because the dyscrasias favor bone destruction by caries or necrosis. If time permitted many interesting cases could be cited to bring home more fully the importance of these dyscrasias as unfavorable modifying influences in acute middle ear suppuration, upsetting the prognosis if allowed to go unrecognized and their specific treatment neglected.

In the case of meningitis, temporal lobe abscess, cerebellar abscess, inner ear abscess, infective thrombophlebitis, or any combination of these, the simple mastoid operation is frequently insufficient. A more radical operation becomes necessary in order to make accessible the infected vital structures.

In view of what has been said regarding the different complications it becomes necessary for the otologist to be alert to the recognition of these serious complications not only in their fuller development, but also in their incipiency (congestive stage) in order to arrest, by the simple mastoid operation, further progression of the complication the moment the danger is recognized and thereby save the patient the risk incurred by postponement.

The symptoms and signs of these complications during their congestive stage, therefore, become indications for the simple mastoid operation in addition to those of uncomplicated mastoiditis presented earlier. Anatomically they are referred to the structures lying adjacent to the middle ear cavity. Before taking these up seriatim it is well to repeat briefly the few general symptoms suggestive of complications which are common to all. They are: earache, fever, unilateral headache, characteristic blood count.

The more specific symptoms indicative of the direction toward which the suppuration tends to spread are:

I. Facial weakness, together with slight twitching in the muscles supplied by the seventh nerve. Associated with these symptoms there is occasionally a peculiar feeling referred to the affected muscles. This is not caused by the presence of any sensory fibers in the seventh nerve, but is more likely an abnormal muscle sensation perceived by the fifth nerve.

II. Circumscribed headache and tenderness that can be covered by the thumb, a few centimeters above the external meatus. This symptom is suggestive of a congestion of the dural covering of the temporosphenoidal lobe.

III. Excessive fever 102° or higher, a temperature rather higher than that which occurs in simple mastoid empyema. The higher temperature points toward involvement of the sinus. It is a symptom well worth heeding and one which often disappears promptly after a simple mastoid operation.

IV. Unilateral headache rather more severe than that listed among the general symptoms. This symptom assumes particular importance as an indication of congestion of the dura when associated with percussion tenderness limited to the side of the affected ear. When this symptom is ignored and operation postponed there frequently develops pachy- or lepto-meningitis, circumscribed or diffuse. This symptom when present assumes the proportion of an urgent indication for operation.

V. Vertigo is a symptom characteristic of inner ear involvement. Care should be taken, however, in eliciting this symptom, for it is possible to confuse labyrinthine vertigo with syncope. Vertigo from involvement of the inner ear is rotational. In other words, the patient experiences the sensation of subjective turning or else sees the outside world turning. Vertigo when of aural origin is always associated with nystagmus.

VI. Nystagmus. In the congestive stage of inner ear involvement the nystagmus is rhythmic in character and is directed toward the side of the ear involved. This symptom in the presence of middle ear suppuration is sufficient indication in itself for the simple mastoid operation. On the other hand, when it is directed away from the affected ear it suggests a more severe complication in the inner ear; that is, suppurative labyrinthitis, for which a simple operation is insufficient and in fact is contra-indicated as a very dangerous procedure. The only operation indicated is the complete radical operation plus drainage of the labyrinth.

1724 Spruce Street.

HONESTY IN MEDICINE*

BEN G. BUDGE, M.D., Ames

Honesty in medicine is the endeavor to give to your patient the care and advice that you would desire if you, like him, were handicapped by disease, incapacitated by sickness, maimed by injury or harassed by fear. A complete code of medical ethics embodying the proper relationship of patient and physician, physician and profession, profession and public, can be expressed in these three words: Honesty in Medicine.

Accepting this definition of honesty, it is an easy matter to look back and judge if in the past we have been honest in medicine, or dishonest; or to look forward and determine what will be our future standing. With simple honesty on the one side, on the other is every form of deception known in medicine, varying in degree of viciousness from the seeking of an easy way out of an uncomfortable situation, to the actual victimizing of an unfortunate patient by a faithless physician.

Is it possible that a certain degree of dishonesty is not only permissible, but under certain circumstances good practice? Is it always best to be honest with the patient? May not a knowledge of his condition react to his detriment? Have you ever known anyone to be more than temporarily disturbed by the frank and kindly talk that led him to a realization that *his* help was needed in his own behalf? Somewhere in any serious situation the truth must out. How much better is a good start with cooperation born of confidence, than an attempt to restore this confidence after the detection of deception. An early tuberculosis is tuberculosis. It is not a rundown condition, a spot on the lung, or a recurrent cold. A coronary disease is a real thing; men do not die from gas on the stomach, or from acute indigestion. Who is more concerned, who has more right to know, and who is more willing to help than the afflicted one? A surprising number of the insane recover. Can you expect to regain the confidence of the befuddled one who, tricked into an automobile ride was landed before the insane commission? Picture the anguish, perchance concealed by a helpless defiance, of the good woman when she realized that she was not only betrayed by her husband, but deliberately lied to by her physician. I have in mind just such a case that resulted in a hopeless vaginitis in two little girls and the almost total blindness of one of these innocent children.

Sometimes an attempt is made to lead us into a sort of honest dishonesty. Who has not received, usually by telephone, this admonition? "Doctor, John is on his way to the office. He has not been at all well. He has been failing. If you find anything the matter with him, for goodness' sake don't tell him, any shock would simply kill him." (What a complete and perfect exit; a sudden and painless death; the ideal end.) Or perhaps it is this: "My boy is determined to play football, and I just can't let him. I want you to examine him and tell him that he has a weak heart." Foolish people; foolish doctor, if he falters. Tell the failing John frankly, that a red flag has been set in his track and that his dyspnea is the groan of a failing engine that can no longer be trusted with the express, but that with care and repair in the round house of rest, may snort and puff in the switch yard for many useful years. Examine this aspiring young athlete in the presence of his mother. Take time. Examine him most thoroughly. Make it a grave and serious event. Take more time. He is expecting to be condemned. Impress on him that a crippled heart is a lifetime handicap. Then with a rousing slap assure him that his heart will stand anything, even to prize fighting. You will have made a friend. Do not crush the anxious mother too thoroughly, but do not let the session end before she is made to realize the evil that might result should her boy, or any boy, enter life with even the shadow of a doubt concerning the integrity of his heart. You will not have lost a friend.

It is best to be frankly honest with the uncomfortable, disagreeable and undesirable patient. It is not fair to slight and then overcharge her. Honesty here may spare you years of endless annoyance. Tell her, if necessary, that she so disturbs you that you cannot *afford* to have her as a patient. Try to reason it out with her, but bear in mind always, that you, like Rip Van Winkle, may be made to realize that a woman's tongue is the only edged instrument that grows keener with constant use.

The venereal victim falls in the most thoroughly grafted class that seek our aid. He is sick, and comes filled with fears. He needs our most in-

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telligent help; yet he is looked upon as legitimate prey; he is not taken seriously. His gonorrhea is overtreated, his syphilis undertreated, and he is usually overcharged. A fee of five dollars for blood that is examined by the state for fifty cents, and one of $15.00 to $25.00 for injecting neosalvarsan that costs us eighty-five cents, place a financial barrier before him that he cannot easily scale. No wonder he stops treatment as soon as the evident symptoms of his syphilis disappear: this disease that had better be untreated than undertreated.

A little more shady is the side-step from honesty to escape the uncomfortable situation that often arises from a faulty diagnosis. When error is bolstered up by untruth, beware! Memory is a treacherous ally. The woman whose four months' pregnancy was absorbed and passed off in her urine (birth control solved right at home), or the patient whose gall-stones were likewise absorbed (magic in medicine), *might* move out of the community, but is more apt to seek, nearer home, and much to your chagrin, further explanation of this marvelous process of absorption. You cannot make it stick. No one ever has, no one ever will.

So often the physician is called upon to do his best when he cannot possibly be at his best, that grave mistakes will happen. Mistakes are explainable, understandable, and forgivable, but willful deception, never.

Honesty in medicine demands honesty of effort as well as honesty of intention. The man who succeeds usually does so by doing the things that the other man knows how to do, but fails to accomplish. A physician recently confided to a friend that there had not been much hard work in his life, and explained that most people get well without a diagnosis, and regardless of type of treatment; when they did not, he could always call in a specialist. A city man was recently asked the name of his family physician. He answered that he had none, saying that when he did have a family physician, he usually had to call a specialist to help him out. Now whenever a member of his family is sick, this member calls on the proper specialist, who never yet has failed to find the trouble within his own limited sphere of endeavor. Wonderful! Wonderful! What marvelous diagnostic achievements some patients develop! I have no quarrel with the specialists. They have helped me in many a hard case. I count some of them among my most loyal friends and look to them as leaders. They voluntarily teach me many things, with full knowledge that patients formerly sent to them will now be cared for at home.

Honesty in Consultation

Whenever you have had time to observe and examine a difficult case you should welcome, and not fear consultation. The history should be reviewed and the examination conducted in the presence of some member of the family, who should then be asked to sit in on the discussion. There should be no effort at secrecy in arriving at an honest diagnosis or in covering up a mistake. If you are right, your position is strengthened. If you cannot agree, do not agree. If you are wrong, you have shown an honest effort to right yourself.

Honesty in Fees

In these times, when according to the findings of the United States Department of Labor, eighty-six per cent of the people of this country are living on incomes insufficient to maintain their moral and physical welfare, we cannot expect to hold to the fees we established in 1919, when every taxi driver wore a $15.00 silk shirt that he literally washed in pungent perfume. We must fit ourselves and our fees into the economic conditions of today. An honest fee is one that is not burdensome to the patient; one that leaves him feeling free to come back without fear of being "fleeced." A patient, or prospective patient, has the right to know about what his expense will be. When this cannot be stated definitely, it is reasonable and honest to tell him that your charges will be made satisfactory to him. Just because a man has been industrious, thrifty and financially successful, is no reason why he should be gouged when he is down.

So thoroughly have we warned the public against the impending dangers of disease, that many who come to our offices are not sick at all. They are driven by fear. Whether sick, in fear, or in distress, most of those who seek our help are in an impressionable mental state that makes them easy victims to the clever trickster. There is no convenient time or place for sickness, and the injured one always feels that he has been hurt in the worst place. The window sash has dropped on the fingers of both hands of the patient. He is helpless. So often is he at our mercy that a Shylock can, and often does, extract his pound of flesh. Let us learn to think in terms of the patient's earning capacity and not rob him of the necessities of life, for something that we want.

The dishonest doctor soon becomes a clever actor, successful in his deceptions and adept in his role. The sick man's fears and worries aid him in his acting. Trifling illnesses become serious. His soft and overkindly voice, his assumed deep interest, his studied anxiety are taken for real soul qualities, and permit of professional attention long after recovery.

The elusive, high-priced expert witness perjures

his soul, and grins in the face of justice. The crooked clinic, like a pirate gang, plunders the wretched wreck so long as gold can be hoisted from her hapless hulk. The lure of the large fee has crowded surgery and the specialties. This is the one instance in which the law of supply and demand has not only been made inoperative, but has actually been reversed. It is here that the grossest of dishonesties have invaded medicine. Unscrupulous doctors advise unnecessary operations by incompetent surgeons whose thirst for the secret division of unjust fees is unquenchable. The patient who should know, just as in any other transaction, where his money goes, is not only robbed, but may be injured by needless or unskillful surgery. No matter how clever the fee splitter, there is usually available an honest man who can do better work. These are the racketeers in medicine who bring to us acute and widespread caustic condemnation.

And what are the results? Sooner or later the dishonest doctor is found out. Fear of this keeps him constantly on the defense. His concern is not for his patients; he is busy covering up. With easy money he loses his ambition to win on merit. He drifts into mediocrity. He becomes bolder. Immorality is an easy step. A life that might have been useful, often has at the end, "regret, remorse and shame."

The medical profession is on trial today. Magazine writers are ferreting out our most flagrant fallacies and an eager public is reading mostly of our faults. People are becoming suspicious of doctors in general, and of surgeons and specialists in particular. Unfavorable legislation is being introduced in nearly every state. Industrial concerns are discouraging the employment of outside physicians by their millions of employees. Accident and health associations are providing for optional surgery. Life insurance companies are wondering if it is not as safe to issue policies on the statements of applicants as on reports of examiners. The national government is supervising our use of narcotics. It is easier to do without alcohol than to procure it through legitimate channels. All of this is being done, not to spare the overworked doctor—Oh, no—but to save the overworked public. If we continue in this direction, the state will ultimately control our activities to the degree that she will parcel out our patients and our pay.

We stand today where we have placed ourselves. It is for us to choose. Shall we continue still to crucify our art upon the cross of trade? Or shall we not with wine of truth restore this noblest of all callings to its fullest glory in the service of humanity.

The wrong exists. Denial here mean nothing: acquiescence, less. Only in a frank and fearless facing of the facts, and willing effort to correct, is there hope for us. Shall we stand idly by and watch the faithless few bring chaos to our calling? What great mistakes we make in ignoring wicked practices that lie within the law. What gross incompetence we tolerate! If the cause is worth the fight, what has been done? The greatest teachers and the leaders of the ages, and all of those who follow, that vast and sturdy army of honorable physicians, have put, and still are putting into their lives and labors, a truth and a devotion that money cannot purchase, nor idle luxury tempt. These men have planted toilfully, the fragrant flowers of faith, that flourish and grow on, in spite of swine that fatten on their upturned roots, and trample down in greed more than they devour.

What can be done? A silent sermon can be preached in every house we enter, with honesty its text. What is more destructive to our dignity and honor, than a doctor's running battle? Should we but merit in our work the faith and lasting confidence that every patient wants to place in his physician, then we need not fear for self, or future medicine.

The eyes of future medicine are constantly upon us. "In youth there lies eternal hope." Can we not live on such a plane that they can proudly follow? With multitudes of forward looking youths, what opportunity we have to choose and train for medicine the best. Ideals as well as skill and learning should stand out in our teachings.

The cause *is* worth the fight! What other calling equals ours? The mass of human kind is in our hands. What other workers ever wrought in stuff like human lives? What other words bring cheer and hope and happiness like ours? We knock and enter, or enter without knocking, knowing well that here, not only are we welcome, but waited for and wanted. Not homes alone, but hearts and souls are opened to us daily. What friendship privileges are ours; what chance to bear responsibilities. Our days are never dull. We know the joyous hope of birth and childhood's bubbling glee. We know the eagerness of youth, the ups and downs of men. We know the struggle and strain—the tragedies of life. We see men now in happiness and now in grief. We see them rise in power and wealth—tomorrow fall in "age and want."

The sinner and the saint, the knave, the priest, the poor, the rich, the weak, the strong, the lowly and the great, all come to us in their distress. We know their fears, ambitions, hopes, the blackness or the whiteness of their souls; for we their deepest secrets keep. Shall we this trust betray? In *honesty* we'll serve, and we'll defend them all until the silence of the end.

Discussion

Dr. Arthur D. Woods, State Center. Mr. President and Members of the Society: Since I have been asked to contribute something to the discussion of this very excellent paper by Dr. Budge, I feel that I could do no better than to quote an oath, not the oath of Hippocrates, which is always in order, but I wish to quote or read to you a more modern oath which I think is fitting and appropriate on this occasion. It will be all that I have to contribute to this discussion. I refer to the oath required of candidates for membership in the American College of Physicians.

It reads: "I pledge myself to consider ever primary to my own the welfare of patients dependent upon my professional knowledge and skill, ever to respect the interests and reputations of my colleagues; as occasion requires, to supplement my own judgment with the wisdom and counsel of competent medical specialists; to render my assistance willingly to my colleagues; to extend freely my professional aid to the unfortunate, the poor and needy; to advance steadily in knowledge by the reading of authoritative medical literature, by attendance at important gatherings of medical men, by post-graduate instruction from men of eminence and position, and by the free interchange of experience and opinion with my associates.

"Further, I promise, insofar as in me lies, to shun the public press or public gatherings of laymen where my attitude might be regarded as seeking self-advancement; to avoid selfishness and commercialism in my professional practice; to influence patients to appreciate their financial responsibilities to their medical advisers; to adjust my compensation to the circumstances of my patients and to make such charges commensurate with the services rendered and to avoid discrediting my profession by seeking unwarranted compensation."

NEURASTHENIA*

Andrew H. Woods, M.D., Iowa City

Definition

As far back as historians, novelists and philosophers have recorded types of human beings, they have described certain men as virile, enthusiastic and creative. In contrast with these, there has always been the opposite type, that is, persons who are disinclined to effort, hard to arouse to enthusiasm, who have a plaintive attitude toward the world and fix their attention upon their own weakness with a sort of melancholy satisfaction.

These persons have been the bane of physicians and of all those who attempt to stir men to public service or even self-support.

Half a century ago George Miller Beard, an American physician, supplied the world with a word which somewhat relieved the embarrassment of physicians. He called these asthenic men and women *neurastheniacs*. Weir Mitchell of Philadelphia, a little later, gained fame and not a little income by devising the rest-cure for neurasthenia.

After two generations of medical effort, however, physicians have come to feel little more satisfaction in regard to neurasthenia than they would feel had they used the less pretentious word, "tired" or "unjustifiably tired" to describe their ignorance of the condition. The word itself means "nerve asthenia." In this case, as with other words, the fact that a label has continued to be used through sixty years, and is still current, indicates that there is a felt need for it. Indeed this word has been so cordially welcomed that it is now used in medical and general literature for too many conditions. Without clearer definition it is more confusing than helpful.

The name neurasthenia, to begin with, should be applied only to those conditions that are marked by feelings of *unearned* fatigue. It does not mean the sense of weakness or weariness that follows adequate effort. Also, if applied to the weakness and feeling of fatigue produced by inanition or intoxication, it should be made clear that it merely describes a symptom and is not a diagnosis. Just as paralysis, blindness and indigestion are convenient words by which to describe definite symptom-pictures, so neurasthenia describes long-continued feelings of fatigue that are produced by the nervous system in imitation of ordinary weariness.

A typical picture of neurasthenia is shown by a school mistress, thirty-eight years old, with the following history and present condition. Her complaints included, to use her own words, a constant feeling of weakness and weariness with disinclination to effort. The slightest attempt to study, to read or to take physical exercise was followed at once by such a feeling of fatigue that she could not drive herself to proceed. Her eyes ached when she tried to read or write. As a rule she was constipated and flatulent, her breath was heavy and she complained of dyspepsia. She felt uncomfortable palpitation of the heart which would come on intermittently and under very slight exertion or emotion. She slept well but awakened with a feeling of even greater fatigue than was present before sleep. Her extremities were cold and moist. She had tingling in the legs and fingers. One of her chief complaints was a dull headache, sometimes in the occipital region, more often appearing as a feeling of pressure in the top of her head. When the examiner tapped certain of the vertebral spines, she winced and complained of tenderness. Mentally, she was alert and all her intellectual faculties were normal.

In talking with such patients the physician is

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struck with the intensity of their self-absorption. They may talk of their work and their desire to accomplish; but it is manifest that their attention is centered upon their own feelings. They are continually trying "cures." They go from physician to physician. They have elaborate ideas as to their own physiologic make-up and the etiology of their complaints. Their mood is rather plaintive than depressed, although they will always say that they are unhappy because of their illness. However, they seem, paradoxically, to get great satisfaction out of their symptoms, in a "sick in bed, thank God" attitude. Their attention is in many cases directed to their genito-urinary apparatus. Women complain of the nuisance of marital relations. Men think much of their waning power and feel a constant irritation in the sexual organs.

On objective examination, most of these people are of the asthenic build: thin, with sallow complexions and wearing a dyspeptic and irritable look. As to actual power, their muscles are not necessarily weak, but long disuse and sedentary habits of course preclude the strength that comes from exercise. The muscles are irritable to direct tapping; they contract in a diffuse way when tapped with the finger or percussion-hammer. The faradic current gives a prompt, extensive contraction, but repeated stimulation exhausts the reaction.

Neurastheniacs as a rule sleep well. In contrast to persons suffering from ordinary fatigue, the neurastheniac is more tired on waking. It is also true that when he develops a sudden interest and works or takes exercise, the feeling of fatigue diminishes. This picture shows that in addition to the most obvious mark of neurasthenia, that is, the peculiar feeling of fatigue, there are other commonly associated features. This indicates that the feeling of fatigue is most probably connected with a certain kind of constitutional make-up. There is a general over-irritability; the patient feels too many discomforts.

SCOPE

Neurasthenia is a convenient term to describe the feeling of fatigue and the other discomforts just defined. The word is used to connote this complex of symptoms, no matter by what cause they are produced. It will now be pointed out that it is applicable in three disease conditions:—

(a) When the above described picture appears as part of the symptomatology of syphilis or any other disease, intoxication or trauma.

(b) When it appears as a congenital condition, a constitutional weakness. Since the somatic system primarily involved in these cases appears to be the nervous system, this form of neurasthenia is a neurosis.

(c) When it is the expression of hysteria. In this case, neurasthenia is a psychoneurosis.

CONDITIONS IN WHICH NEURASTHENIA OCCURS

Infections and intoxications. A state of distressing asthenia, with many or all of the attendant symptoms and signs above described, often follows in the wake of infectious fevers such as typhoid, typhus and influenza. It is possible here that the tissues of the body in general, but particularly the nerve-cells, have been both poisoned and exhausted. After prolonged sepsis and in some forms of tuberculosis this excessive fatigability may be seen.

This symptomatic neurasthenia is also presented in certain forms of syphilis. It may be the only abnormality presented in the symptom-picture. A soldier was once under my care who gave the history of having been unusually active and efficient up to about two years before the examination. He then gradually developed a disinclination to work, so that the slightest effort of mind or body caused him excessive fatigue. He suffered from headache and vague pains along the spine and in his joints. The circumstance that this change had come upon him rather suddenly, and that the lack of virility, both as to sexual performance and in his work was in distinct contrast with his former condition, led to the suspicion that syphilis was present. His blood and spinal fluid Wassermann tests were positive and six months of treatment restored him to his former good health. Another patient, who at first answered the classical description of "congenital neurasthenia," proved to have congential syphilis.

The habitual use of morphine, cocain or alcohol may produce all the essential features of neurasthenia. Sometimes traumas to the head or spine are followed by asthenia and a general sensitiveness to proprioceptive stimuli.

In all of these cases, this irritable asthenia is only a part of the symptom group of some definite disease, and it is well to call it symptomatic neurasthenia.

Masturbation. Masturbation and interrupted sexual coitus, if carried to excess, are blamed as the cause in some men or women of so perfect a picture of neurasthenia that some writers have come to the belief that neurasthenia is due in the majority of cases to these practices. A problem somewhat difficult to solve confronts us when we attempt in any given case to separate cause and effect in these cases of so-called sexual neurasthenia. It seems probable that only persons of a certain morbid make-up would allow themselves to carry masturbation to this extent. Coitus inter-

ruptus is more likely to produce anxiety states than it is to produce neurasthenia.

Constitutional Tendency. After viewing the various forms of organic disease and the various abnormal habits that induce the neurasthenic state, we find it present in many other persons in whom we can find no evidence that such causes have operated. Perhaps there is a constitutional factor here just as there is an essential difference in make-up between the virile, sthenic, enthusiastic kind of man and the feeble, relaxed, adynamic kind. Now and then we see a patient who has been of this weak make-up from infancy, but, as a rule, the neurasthenia first shows itself in the second or third decade. The strain of life is small during infancy and childhood, and it may be that for this reason, the neurasthenic state does not become apparent until the stress and competition of adult life begin.

It is not proven, but it is possible that the threshold for fatigue is low in some persons because of a peculiarity in their original make-up. This defect may be congenital, due to a fault in embryonic cells or to poor intra-uterine conditions; or it may be inherited. Having such a predisposition, it is conceivable that a person might go through life without showing signs of neurasthenia, if fortune has favored him to the extent of keeping his environment comfortable and protecting him from heavy struggle. However, the less fortunate break down when their load begins to be heavy.

Neurosis is a disease due to faulty functioning of the nervous system when the fault cannot be traced to any organic cause. Neuralgia and pruritus are common examples of neurosis, but if a neurosis is the result of wrong ideas and emotions, it then become a psychoneurosis. The neurasthenic teacher described above showed a definite asthenia from her childhood and from puberty onward began inordinately to feel little discomforts which other children would not have noticed. She therefore showed a constitutional tendency to defectiveness of energy production. Such cases I think should for the present be classed as forms of neurosis. Pending proof that neurasthenia of this form is due to emotional causes, it is definite enough and is seen sufficiently often to lead us to classify it as a disease entity. In many of these cases there appears to be no more connection between this irritable asthenia and the patient's psyche than there is for instance, between some forms of hypersensitiveness of the retina and the psyche.

Neurasthenia and Psychoneurosis

(a) Neurasthenia complicating psychoneurosis. Neurasthenia most often appears in persons who have a general tendency toward introspectiveness and morbid concentration of attention upon their own organs. This is the type of person who is most liable to various forms of psychoneurosis. As a matter of fact, we often find that hypochondriacal and hysterical patients and those suffering with "anxiety neurosis" also show neurasthenia. This has led many writers on neurasthenia to include as part of its symptomatology the various features of those three forms of psychoneurosis. It will keep the subject much more clear if we say in these cases that the hysterical patient has also developed a neurosis-neurasthenia. It is a mixed picture of the same sort as when a hypochondriacal patient develops pruritus as a complication.

Despondency tends to produce in its victims a general feeling of weakness. When a major longing has been disappointed and the future holds out no hope, men or women often develop the group of symptoms described above as characteristic of neurasthenia. In deep sadness, these features may be present temporarily, and are a part of the physiologic somatic response to that particular emotion. In some cases, however, they may continue indefinitely. The relationship between such a type of neurasthenia and the emotion is somewhat like the relationship between neurasthenia and toxic or infectious processes. Perverse emotions produce profound metabolic changes, which are capable of altering the nerve-cells and even grosser tissues, just as trauma or toxins may alter them. The relationship of the emotion is quite different here from that present in psychoneurosis.

(b) Neurasthenia as a psychoneurosis. We have noted above that the introspective, morbid personality of the neurastheniac makes it easy for him to develop a psychoneurosis. Conversely, an hysterical person may select neurasthenia as the hysterical drama to be enacted. His nervous system is not only free to select neurasthenia, but it is a role somewhat easier for it to play than, for instance, epileptiform convulsions or paralysis.

The essence of psychoneurosis is the escape from unpleasant reality by a short-cut. We run from life, yet in such a way as not to get ourselves called cowards. One of the commonest ways out is the exit into invalidism. The role unconsciously played by hysterical persons is always one with which they are familiar, and all of us are well acquainted with the picture of neurasthenia. Each small town has its quota of neuras-

theniacs, and they are not inclined to keep silent about their symptoms.

A married woman, recently observed, had passed the period of sexual attractiveness. Her husband was tired of her. She argued and pleaded with him and then threatened him with vengeance from her family, but he responded with more cordial dislike. At length she developed headache and dyspepsia, and went to see a doctor. He informed her that nothing was wrong with her and advised her to use strength of will. As she left his office, she suddenly fell on the pavement and informed those who assisted her that she was too weak to walk. She was carried home and there remained in bed, a feeble invalid, with no interests except her symptoms, unable to work, a typical example of neurasthenia. Inasmuch as this condition developed out of a difficult emotional situation and was evidently designed to give emotional relief, it fulfilled the requirements for the diagnosis of hysteria. In this case, we see neurasthenia as a real psychoneurosis of the "conversion" form (conversion of emotional suffering into a respectable physical disease.)

Conclusions

1. Symptomatic neurasthenia may attend various diseases that diminish the energy production of the body.

2. Neurasthenia occurs as a constitutional condition in which the power of the person's body to produce energy is deficient. We do not understand the physiologic mechanism by which energy is produced in normal persons, but if we consider that the fault in these congential cases is due to inadequate working of the nervous system, it is proper to call such a condition a neurosis. Some writers, such as Tanzi, consider neurasthenia as a hyperesthesia of those proprioceptive nerve-cells by which we normally are made aware of fatigue. If this conception is correct, neurasthenia could be looked upon as merely a form of hyperesthesia of the sensory nervous system. This is too simple an explanation, and its correctness is certainly not yet demonstrated. However, if it were shown to be correct, neurasthenia would still be a neurosis.

3. Neurasthenia may be a manifestation of the psychoneurosis-hysteria, when it is adopted as a way out of emotional difficulties.

Treatment

In the cases of neurasthenia following organic diseases, the obvious therapeutic procedure is the removal of the basal disease.

When neurasthenia is produced by long continued depressing emotions, nothing curative can be accomplished unless those emotions can be replaced by serenity. In these cases the personality of the physician often produces the cure. If he has gained the confidence of the patient, it often turns out that his cheerful philosophy of life, coupled, perhaps, with a sense of humor, gives the patient a new view of the whole situation and revives an interest in living.

However, cases of long continued despondency must be distinguished from the depressed psychoses, as seen in manic-depressive insanity and in the involutional melancholias. When a depressed psychosis is present, the change in affect is to be regarded as a primary disease. It is not amenable to the cheerful attitude of the physician, and the philosophies of life make no impression upon the patient.

In the cases of neurasthenia that may be viewed as a form of true psychoneurosis, the treatment is that of the psychoneurosis itself. The physician must go back into the previous life of the patient and uncover the emotional conflicts from which the patient seeks relief through the neurasthenic drama. In this connection, it must be emphasized that arguing and scolding on the part of the physician are futile. Patients cannot be reasoned out of their psychoneurosis. Also, such methods as the application of painful stimuli and efforts to frighten the patient as a rule make the condition worse. Under the impulse of fear he may pay the fee, pretend to be cured, and escape from the physician's office, but the disease will continue, probably in graver form.

When masturbation is followed by neurasthenia, the main trouble is usually the condition of fear and anxiety instilled in the patient by the ordinary parental and ecclesiastic teachings on the subject. In many cases, the simple explanation that masturbation is natural and that, practiced as is ordinarily the case, it does not produce mental or nervous disease, suffices to remove the fear, and the symptoms then disappear. Masturbation is a futile and undesirable habit and normal people abandon it after it has accomplished its natural purpose of orienting sexual feeling upon the genital organs. It is often continued because of the concentration of attention upon it that has been produced by the erroneous teaching referred to above. The very fear of masturbating keeps the attention of the boy or girl morbidly fixed upon the genital organs and as a result, the sexual excitement keeps returning. Tension is thus produced and the patient resorts to masturbation as a means of relief. If he has come to view it as a monkey-like trick which is looked down upon by society because of its obvious futility, he gets a

new attitude toward it and it becomes easier for him to abandon it.

Neurasthenia which develops early in life, not upon an emotional basis but due to some constitutional fault in the energy-producing mechanisms of the body, is not easily amenable to treatment. These are the cases that supply the quacks and sanataria for nervous invalids with a never ending stream of patients. While their difficulties are not caused by emotional disturbances, the patients are, nevertheless, subject to the same variations in energy-production under emotional stimulation as we see in all other classes of persons. Under encouragement and when happiness can be induced, their small stock of energy is proportionately increased. The stimulating personality of an encouraging physician may bring the working power of such a person up even to the point of making a living, but these patients become emotional parasites upon their physicians. The encouragement and stimulation have to be fresh every morning and renewed every evening.

THE PSYCHOTHERAPY OF NEURASTHENIA

With Special Emphasis on the Psycho-analytic Method*

William Malamud, M.D., Iowa City

I. Introduction

The rational methods that the physician employs in the treatment of those who seek his help may be divided arbitrarily into two general groups: (1) corrective treatment, and (2) therapy proper, or healing. The first is usually employed where we are dealing with a congenital lack or acquired loss of tissue that cannot be replaced. In such cases our objective is simply to correct the defect or train the person so that an adjustment to his environment may be effected in the presence of the particular handicap. Thus, for instance, it would be useless to think of "therapy" in a patient with microcephalic idiocy, when all we can do is to train this person to use the amount of brain tissue that he has to the best advantage. Thus, too, in a case where the loss of tissue makes the amputation of a limb necessary, this can never be returned to the patient but we can correct the difficulty by the construction of an artificial limb.

In another group of cases, however, actual therapy can be undertaken. In these we are dealing with acquired processes where the treatment is instituted for the purpose of removing the cause, thus returning the function of the affected organ. The administration of antitoxin in diphtheria, for instance, or the removal of a focus of infection causing remote effects, would come under this category.

One cannot, of course, draw a hard and fast line between the two types, for in most cases we practice both methods in varying proportions. In the majority of cases, however, we find that either the one or the other predominates in our treatment. In the discussion of the proper management of any given patient, we will, therefore, first of all aim at a decision as to which one of these two types of treatment will be used predominantly. It is quite clear from the distinction made between the two, that our decision will depend primarily upon a clear concept of the condition dealt with and, what is even more important, upon our knowledge as to the cause of it. One must emphasize this fact particularly in those cases that belong to the second group, i. e., where we are to attempt actual therapy, because no success, however small, can rationally be prognosticated unless we are clear in our own minds as to what constitutes the cause of the disease.

The practice of psychotherapy too, will depend primarily upon these prerequisites, in fact even more than any other form of therapy. We all know that rational, scientifically controlled psychotherapy aims, above everything else, at imparting to the patient as clear an understanding of himself and the mechanisms behind his symptoms as is possible. In doing so the physician will, of course, have to be reasonably certain that such mechanisms actually exist and will be expected to have at least a general knowledge of what they are.

I find it particularly important, therefore, to outline our concept of the nature of neurasthenia and its causes before we can approach a discussion of the possibility of applying psychotherapy to it. It is quite clear that if we should find in our study of neurasthenia that it is a constitutional ailment; that is, that certain persons, either by virtue of hereditary transmission or prenatal injury, are born with an irreversible defect in their make-up that makes them not only predisposed but actually doomed to be neurastheniacs, then no therapy, and least of all psychotherapy, would come into question. Under such conditions the best that we can hope for is to institute some form of corrective treatment for them. If, however, we should find that at some time during the life of the neurastheniac, either early in childhood or immediately before the occurrence of the breakdown, something has occurred which could be looked upon as the most important factor in the causation of the disease and that also by its presence keeps on acting as a cause of its continuation, we could at-

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tempt a removal of this cause for the purposes of healing. This does not mean that we must regard this cause as the only one in the production of neurasthenia. It is conceivable that the constitutional make-up of the person may also have something to do with the occurrence of the disease. If this constitutional factor is of only secondary importance, however, so that we could conceive of the person as continuing to live a comparatively normal life if the acquired factor should not have occurred, then, and only then, could psychotherapy be regarded as a rational and indicated method of treatment.

II. Review of Literature

First of all then let us see what we can regard as the most acceptable concept of the nature and causes of neurasthenia. A review of the literature in relation to the definition of neurasthenia shows us that most recognized authorities on the subject agree in this regard only within very broad limits. Thus we find that Bleuler,[1] one of the greatest modern authorities in psychiatry, recognizes two types of this disease: (1) neurasthenia proper, and, (2) what he calls, pseudo-neurasthenia. Under the first heading he places the symptom-complex consisting of: irritability, increased fatigability, difficulty in performance of mental tasks, exaggeration of minor symptoms, pressure or pain in the head, physical weakness, parasthesias, fluctuations in pulse rate, low blood pressure, poor appetite and sleeplessness. Under the term pseudo-neurasthenia he considers a much larger group of patients complaining of such symptoms as gastro-intestinal disturbances, tremors, fear, palpitation, sexual impotence, frequent pollution, etc.

Gaupp[2] considers the neurasthenic syndrome as consisting of: Tachycardia or bradycardia, fluctuations in blood pressure, tremors, loss of weight, exaggeration of slight symptoms, gastro-intestinal symptoms, general asthenia, irritability, sleeplessness and sexual disturbances. Thus we see that Gaupp places under neurasthenia a number of symptoms that according to Bleuler do not belong to it. Oppenheim,[3] finally, groups under the term neurasthenia a still more heterogeneous series of symptoms; both general, such as irritability, physical and mental inadequacy, and vague anxiety feelings, and more localized ones, such as circulatory, gastro-intestinal, sexual and others.

It must be emphasized that the concepts quoted here are not expressions of isolated authors in this field, but of leaders who represent the opinions of large numbers of followers. An analysis of these concepts shows quite definitely that the disagreements are not dependent upon a fundamental difference of opinions as to what neurasthenia is, but are rather due to a shifting of its limits. Apparently we are dealing with a certain nucleus of symptoms, which is regarded by all authors as belonging to neurasthenia. Outside of this central group of symptoms, however, there are numerous others which some regard as belonging to neurasthenia, while others feel that they are manifestations of other diseases.

This vagueness in the definition of the concept of neurasthenia and the fluctuations of its limits with the different schools have not helped any in clearing up the views as to its etiology. As the concept was broadened by some of the observers to take in a great many new symptoms, the etiologic possibilities, too, increased. The tendencies of the scientists interested in this field have been to regard the disease as caused by a number of factors, with one or two of these factors playing the more important roles.

If we return now to the question advanced above, i. e., whether neurasthenia should be considered as predominantly a constitutional or an acquired disease, we find the opinions pretty well divided. Thus, Oppenheim was of the opinion that the most constant and most important factor in the causation of neurasthenia was a constitutional (hereditary) predisposition. He spoke of the possibility of congenital neurasthenia where the constitutional factor was so predominant that the person had always presented the neurasthenic picture. In those cases where the disease became manifest later in life he considered as possible secondary causes such factors as overwork, mental or physical; worry of any type and emotional shock. On the other extreme, we have the opinion of Gaupp, who states that under neurasthenia he understands a condition which can develop in a constitutionally normal person. He is of the opinion that patients showing a constitutional inclination to so-called neurasthenic manifestations should really be considered as psychopathic personalities and that they do not belong to the group classified under the heading of neurasthenia. A number of authors agree with him in this statement.

This group also expresses doubt as to the etiologic importance of a single factor, such as exhaustion, shock, or emotional trauma, causing the first manifestations of neurasthenia. This is, of course, quite intelligible in view of the fact that they do not attach any importance to the constitutional element.

Between these two extremes we find a series of gradations. Bleuler, for instance, does not express himself as strongly on the absence of constitutional predisposition, but he differs from Oppen-

heim in that he does not feel that any single event in the life of the neurastheniac, such as an emotional shock or a short period of exhaustion or over-work, is of great importance in the development of the disease. Both Gaupp and Bleuler are of the opinion that the cause of neurasthenia is to be looked for in the evolution of the personality and the occurrence of obstacles to emotional adjustment anywhere along the line of its development.

So far, then, the situation seems to be anything but clearly defined. It should be emphasized, however, that this state of affairs is not an unusual one and not particularly limited to this field. We find this difficulty cropping up in other branches of medicine, in fact in biology in general, and it would seem to be particularly prone to occur in connection with symptom complexes, the definition of which depends upon purely descriptive consideration. It was chiefly the appreciation of this fact that gave rise to the development of the tendency to classification on the basis of etiology that has won so many adherents in the medical sciences within recent years. In the field of the neuroses this tendency was especially stressed by the psycho-analytic school.

The application of this principle to the definition of the concept of neurasthenia and the neuroses in general was introduced by Freud as early as 1894.[4] He advanced the view that the neuroses could be divided, on the basis of their probable etiology, manner of development and clinical pictures presented, into two general groups: (1) The defense or psychoneuroses, and (2) the actual neuroses. The psychoneuroses, which included such processes as hysteria, obsessions, and phobias, were defined by Freud as being altogether psychogenic and dependent upon the operation of repressed factors. These factors were considered as originating in early wishes, the gratification of which was contrary to conventional regime and therefore repressed. The symptoms were really substitutes for the repressed wish. The actual neuroses he considered as being primarily due to an actual noxa that was present at the time of the manifestation of the disease. In this group he placed two entities, (1) neurasthenia, and (2) anxiety neuroses. A third symptom complex, hypochondria, he considered as most probably belonging here, but so intimately related to other diseases that one could not consider it as a clinical entity in a strict sense of the word.

Under neurasthenia he grouped a series of patients who showed the following, rather clearly defined, symptom complex: exhaustion, sense of pressure on the head, flatulent dyspepsia, constipation, spinal parasthesias and sexual weakness. After the exclusion of a number of more or less similar conditions occurring in the course of some organic diseases (syphilis of the central nervous system, tuberculosis, etc.), a clearly defined entity was left, consisting of the above symptoms and caused by two factors: (a) predisposition, and (b) prolonged or excessive masturbation acting as the "actual noxa."

Anxiety neurosis he considered as the other clearly defined representative of the actual neuroses, etiologically as well as symptomatologically different from neurasthenia. The symptoms consisted of: irritability, anxious expectations, panics, fear, vertigo, trembling, sweats, tachycardia, diarrhea, insomnia, etc. Here, too, he considered two factors as being of prime etiologic importance: (a) predisposition, and (b) prolonged sexual stimulation by an actual love object but without adequate sexual gratification. A situation of this type he found to occur especially frequently in the practice of coitus interruptus, the frustrated excitements that occur in the course of prolonged engagements, prolonged abstinence either from masturbation or actual sex relations in face of continued stimulation by members of the opposite sex, etc. In neurasthenia, then, just as in anxiety neurosis, Freud claimed the causative factors to be first, a predisposition to disease, and second, an actual noxa consisting in a frustration of the sex act. Neurasthenia differed from anxiety neurosis in that in the former, the frustration was represented by the lack of an actual love object.

What then could be the treatment of such cases? Primarily the removal of the actual noxa (i. e., cessation of masturbation) and then the attempt at understanding and, if possible, affecting the predisposition. Originally Freud took a somewhat pessimistic attitude toward the outcome of such treatment. This was influenced by the fact that he regarded the predisposing factor as mainly constitutional (hereditary) and because in the process of the development of this neurosis he could see no psychologic mechanisms, but regarded the reaction as on a physiologic or organic level.

That this was not altogether justifiable was shown by the fact that Freud himself has revised his opinions in that respect to a marked extent. Still maintaining that the clinical entity of neurasthenia was distinct from other neuroses and psychoneuroses and that the causes were predisposition and an actual noxa, he nevertheless discovered new facts concerning the nature of these two causes. Under predisposition he considered in later communications[5] a combination of "inborn varieties of the sexual constitution and the effects of external experiences in early childhood." As he stated elsewhere,[6] "the traumas of childhood

can lay the foundations of a neurasthenia which will develop later," meaning by these traumas the same that are found to be operative in the production of the psychoneuroses. Furthermore, he believed that the actual noxa (such as masturbation) in itself may have been conditioned by early experiences; and finally, "it not infrequently happens that a neurasthenia or anxiety neurosis is maintained, not by the current sexual noxae, but only by the continuous effect of the memory of childhood trauma."[7] When we take these revisions into consideration, then, even if we agree with Freud that pure neurasthenia always develops in people who practice prolonged and excessive masturbation (a statement which, as will be seen later, is not invariably true to facts,) we find an altogether new attitude possible in the problem of psychotherapy in this disease.

It seems to me that the psycho-analytic view of the nature and etiolgy of neurasthenia, as presented above, offers not only the most definite and psychotherapeutically hopeful concept, but also, what is more important, the one that is best supported by actual facts. With it as a nucleus, and taking into consideration the observations made by others, we can formulate the following point of view:

III. Concept of Neurasthenia

Neurasthenia is a well defined symptom complex consisting of generally increased irritability, mental and physical fatigability, flatulent dyspepsia, sexual weakness, sense of pressure on the head and a feeling of general exhaustion. Some more or less similar conditions may occur in a number of organic diseases, but outside of these we find this symptom complex occurring either alone, in combination with other neuroses (anxiety, hysteria, etc.,) or preceding or following these, where no actual organic cause can be found. As such, neurasthenia develops in persons who may or may not have some constitutional predisposition to this mode of reaction, but if such be present (which is difficult to prove or eliminate) it is not the most important causative factor. In other words, such a person could most probably go through life without the development of neurasthenia provided two other factors which serve as the deciding causes were present. These two factors are: (1) experiences early in life that prepare the foundation for the neurosis, and (2) actual noxae, operative at the time of the precipitation of the neurosis (masturbation and other forms of faulty emotional adjustment.)

In the treatment, then, we will aim primarily to bring about a cessation of the actual noxae, a procedure which can be carried out successfully only after we have discovered why the person is subject to them. Second, we will attempt to discover and remove the acquired predisposing factors. This type of treatment, if carried on to completion would, of course, represent the ideal in cases of this type. In practice it is only in some of the cases that we actually succeed in removing both of these factors. Most usually it is only the superficial or precipitating factor that can be attacked. This is partly due to the time necessary in treatment of this type, and partly to the complexity of the technic. In each case one is always aware of the fact that when one has been successful in removing only the top layer of the mechanism, there is still something left which may cause a breakdown later on. In the following examples I wish to illustrate the psychotherapeutic approach of such cases, keeping in mind the different degrees of the completeness of the treatment.

IV. Material and Treatment

Case 1. G. S., a white, American male, aged nineteen, came to the hospital with the complaints of irritability, weakness, easy fatigability, pressure in the head, sexual impotence, etc. Physical examination revealed no positive findings. A brief study of the development of the patient brought out the following important facts: He began to practice masturbation about the onset of puberty and has always experienced a feeling of guilt about it. He was afraid of the consequences, especially some form of physical debility and began to watch for symptoms. A short time before he came into the hospital, in searching for advice on the matter he had picked up some pseudo-medical information on the subject. From this he learned that his habit would lead him to the development of physical and mental weakness, sexual impotence and a score of other symptoms. These he promptly proceeded to develop, especially since he had been on the lookout for such symptoms for quite a long time.

All these facts were, of course, obtained from the patient himself, and this meant a frank admission of the habit and a discussion of the validity of his fears. The falsehood of the information he had obtained and the lack of any foundation for his fears were pointed out to the patient and the true nature of masturbation freely discussed with him. He was told that it is a phenomenon which is to be regarded as normal at a certain stage of human development, that, provided it is not carried to great excess and late into adult life, it can cause no difficulties and even then only because of the fear of imaginary consequences. His stay with us was comparatively brief and as can be seen, our treatment remained on a

rather superficial level. We were not able to get far enough in the analysis of his personality to discover why he should have had difficulties in emancipating himself from the habit, or, in continuing it, what it was that prompted the unusually pronounced sense of guilt and fear, and finally what it was that predisposed him to adopt the neurasthenic type of reaction. The treatment that he did receive, superficial as it was, resulted in a clearing up of the symptoms and, as far as we know, cessation of masturbation. The patient went home freed of both, temporarily at least. It is of course possible that he may be able to adjust himself and continue to be well, but, in view of the rather superficial nature of the treatment, there is the possibility of the patient's slipping back into his neurasthenic reaction again or developing another type of neurosis.

Case 2. M. H., a white, American female, aged nineteen, came to the hospital with the complaints of feeling tired and listless, of a "tight" feeling in the head, backache and fear of going insane. Physically this patient, too, was entirely well. In the history we found the following points of importance: The patient's mother, who was of the solicitous, demonstrative type, had always babied and pampered the patient and her older sister. The latter was and, as far as the patient remembered, had always been a nervous invalid. (The symptoms were very much like those of our patient.) The patient developed normally and was quite well until about the age of puberty. Some time before that she had started the practice of masturbation. At the time of puberty the mother, while instructing her in matters concerning sex, painted a gruesome picture of the results of masturbation, although she did not know that the girl practiced it. One of the things that particularly impressed itself upon the patient's mind was the mother's statement that the habit would lead to "softening" of the brain and insanity. From that time on, the girl lived under the constant fear of the possible consequence of a habit which she could not stop. There was no attempt, of course, to divert the girl's sex interests into proper channels. In fact, the mother did not at all approve of any contact with the opposite sex. The patient gradually went into a state very much like her sister's. She had to be kept out of school, gave up her outside interests and gradually developed a typical picture of neurasthenia. A short time before she came into the hospital, an uncle who had been in a state hospital for quite some time, died of general paresis. The patient was told that her uncle died of "softening" of the brain and this set her thinking in more concrete terms about the old fears. The result was that the neurasthenic picture was enriched by a new symptom and she was brought to the hospital. Here, too, most of the history was obtained from the patient with results similar to those reported in Case 1. The symptoms gradually cleared up, she gave up the auto-erotic habit and finally went home, where she took up her school work again and is reported to be doing well.

In this case, then, we have been able to go a little further in the understanding of the mechanisms and structure of the problem. But here, too, we have not been successful in finding out the real background of the development of the habit, the reason for its continuation and the patient's attitude toward the whole problem. In both of these cases, although we have succeeded in removing the symptoms, we have no assurance as to the degree of permanence of the results. Here, as well as in the first case, we have to take into consideration the possibility of the recurrence of the trouble, or, what is even more important, the development of a more serious type of mental disturbance. The latter is especially well demonstrated in our next case, where we can also see the effects of a more thorough analysis that affords a deeper insight into the fundamental structure of such problems.

Case 3. E. A., a white American married man, aged thirty-four, came to the hospital with an advanced case of torticollis. This condition had existed for several months in spite of intensive "treatment" by physiotherapy and osteopathy. The wry-neck was not the first manifestation of nervous disease in this patient. During the war (while in the army) he suffered from a "nervous breakdown" which consisted of symptoms typical of neurasthenia and which continued, with ups and downs, right up to the development of the torticollis. An analysis was undertaken in this case and the following were some of the facts obtained:

The patient and a sister one year his junior were the only two children in a home environment marked by economic difficulties, a strict, selfish father and a neurotic mother. The patient's early attachment to the mother, frustrated by the harshness of the father and unsympathetic, unappreciative mother was transferred to the little sister. Although younger than the patient, the sister took the role of a mother substitute and by her very affection and sympathy forced the patient to look up to her for protection. She died at the age of five, and the patient, left all to himself, in searching for a substitute for the sister, developed a pronounced attachment to a girl in the neighborhood one year his senior. The new playmate was a rather precocious child and introduced the pa-

tient to a number of premature sexual practices which were a mixture of childish attempts at heterosexual relations and mutual masturbation. Shortly after the beginning of this acquaintanceship the patient was rather forcibly replaced in the affections of his friend by an older boy who came into the neighborhood. The patient attempted some resistance but was overpowered by the older boy and, left alone once more, he withdrew into himself, gratifying his longings for the little girl by masturbation during which he imagined himself playing with the girl.

Discovered in the practice of this habit by some of the older boys he was laughed at and told that it would be followed by physical and mental weakness and on one occasion an eighteen year old degenerate was pointed out as an example of the result of masturbation. One of the characteristics of this degenerate was a peculiar tick consisting of a twist of the neck to the right side. The patient was frightened but did not give up his practice as he was faced with the difficulty of having to fight a losing battle against the stronger boy in obtaining the only other alternative, i. e., the affection of the little girl. At the age of puberty an attempt to emancipate himself from the habit by the cultivation of the affection of another girl was again frustrated. Here too he was forced out of the field by an older boy. The patient went back to his habit, the only method of sex gratification which he could practice without fear of facing a stronger opponent. As time went on the conflict became more accentuated. The patient's fears of the effects of masturbation became more marked but at the same time his attempts to outgrow the habit and substitute heterosexual interests became less effective. When the war was declared he enlisted, feeling that in this way he could prove to himself and to others his courage and masculine qualities. Here too, however, he was doomed to disappointment. The girl with whom he began to go out shortly before enlistment, did not approve of waiting for his return from France, broke her engagement with him and married another man.

The patient's attempt at drowning his sorrows in drinking and dissipation with his fellow soldiers ended in a fiasco. The shy, bashful youngster just could not get himself to enter wholeheartedly into the life of a rowdy and instead of finding a satisfactory solution for his problem; he only succeeded in establishing a reputation as a weakling and "sissy." He became still more addicted to his masturbation habit and withdrew from most camp activities, his fears of the inadequacies caused by masturbation gradually developing into an accomplished fact.

The final blow came when in France he was declared by the physician as unsuitable for active service because of impaired vision. It was then that the patient showed the first signs of his neurasthenic reaction. The correct diagnosis of the condition and the relegation of the patient to a rest-cure, of course, did not produce any lasting effects. For one thing the patient went on masturbating, for another the diagnosis of "nervousness" just helped to increase the fear of the patient. The further development of the case, the gradual cropping up of the old fear of the tick, the attempt at keeping his head bent to the left so as to counteract it and the final development of a wry-neck, can be dispensed with in the consideration of our problem. The accentuation of the difficulty was brought about by an unhappy marriage to a frigid woman and a continuation of the masturbation and the conflict after marriage.

The important fact is that after an analysis of the case and a thorough understanding on the part of the patient of the mechanism of his disease, both the torticollis and his neurasthenic reaction cleared up. The patient went back to his work, which he had had to quit on account of the torticollis, and since then has made a good adjustment.

Here, then, we are dealing with a number of interesting factors. We see that both the habit of masturbation and the predisposition towards a certain type of neurotic reaction were deeply rooted in the early life of the patient. Furthermore, although the masturbation may be looked upon as the actual noxa that caused the neurasthenia, it was the patient's attitude and fears that were mainly responsible in producing the disease. Finally, the failure to recognize these facts resulted not only in a loss of some ten years of healthy life, but also in the production of a new series of symptoms that made things much worse than they were before.

Before concluding I wish to mention briefly one more case in which a fairly typical neurasthenic picture developed, apparently not on the basis of the practice of masturbation.

Case 4. V. R., a white American single girl, aged twenty-three, came to the clinic with the complaints of general mental and physical exhaustion, gastric disturbances, feeling of pressure and "tightness" on the head and general irritability. Previous to the onset of the disease she was working as a stenographer but had to give up this work because of her weakness and for about a year preceding her arrival at the clinic, stayed home, most of the time in bed. Here, too, a complete analysis was undertaken and the following are some of the facts brought out: the patient's father was of a coarse despotic type who drank a good deal

and, when drunk, abused both the patient and her mother. The latter was a weak, demonstrative woman who both adored and hated the husband. This ambivalent attitude was taken over by the patient and the mother's teachings were to the effect that all men were of that type. An early experience during which the patient accidentally witnessed the marital relations between the intoxicated father and the weak, abused mother helped to establish a relationship between this type of man and sexual activity in general.

The parents were divorced when the patient was about seven years of age, the girl remaining with her mother. The undesirable attitude toward the opposite sex that was conditioned in the patient by her early experiences was further strengthened by the teachings of the disappointed mother during the ensuing years. The girl grew up with a desire for revenge and early in adolescence developed the policy of "playing around" with men, getting as much out of them as possible and then dropping them. This was rendered especially feasible as the patient was a rather attractive girl. The policy was carried out successfully as long as the patient dealt with men toward whom she remained cold. At the age of eighteen she met a man, a few years her senior, who was the exact replica of her father. She fell in love with him and in time decided to marry him. All along her feelings toward him were a mixture of love and hatred. She admired him for his strength and abilities but hated his overbearing, despotic attitude.

As soon as it became certain that she was going to marry him and he began to make approaches of a more intimate character, the patient began to develop what in time resulted in a typical neurasthenic picture. The analysis of the case resulted in her recognition of the nature of her illness. She gave up her associations with this man and later on started going out with a man who was the direct opposite of her father; kind, sympathetic, even though somewhat weak. The patient got well and eventually married the second man. At no time during the analysis did anything come out that would point toward the existence of a masturbation conflict. The patient denied ever having practiced the habit.

V. Conclusions

In view of the above discussion and the cases presented, the following conclusions appear justifiable:

(1) Neurasthenia is a symptom-complex caused by a predisposition towards this type of reaction and actual noxae serving as precipitating factors.

(2) The predisposition may have some constitutional component but the important and decisive elements in it are furnished by the occurrence of early experiences that form the foundation for the neurasthenic reaction.

(3) The actual noxae (masturbation or other forms of faulty emotional adjustments) are conditioned by experiences early in life.

(4) In view of these facts neurasthenia can be successfully treated by psychotherapy.

(5) The treatment consists in the attempt at complete removal of both predisposing and precipitating causes. This may not be possible in all cases and thus the treatment may be of different degrees of completeness. The more superficial the treatment, the greater the chances either for a recurrence of the neurasthenia or for the development of another superimposed mental disease.

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RHEUMATIC HEART DISEASE*

Dennis H. Kelly, M.D., Des Moines

There is no phase of medicine that is more interesting or that presents more practical and scientific problems than rheumatic heart disease. Pathologists recognize that cardiac disease occurring before forty years of age is rheumatic, from forty to sixty it is luetic, and after sixty it is from degenerative lesions. According to Coombs[1] ninety per cent of cardiac disease before the age of forty is rheumatic, and the onset of two-thirds of adult cardiac morbidity occurs from five to fifteen years.

It is impossible to estimate, either from the economic or the humanitarian standpoint, the crippling effect of this serious disease. It is a challenge to the medical profession to organize against it and to conquer it. The success attained in the fight against tuberculosis points the way.

Rheumatic fever is a chronic disease resembling in many respects the infections of tuberculosis and of syphilis. It is not merely a disease of the synovial membranes, for changes occur in practically every vital organ. Carditis is just as much a part of the picture of rheumatic fever as polyarthritis, chorea, or subcutaneous nodes, so the problem of rheumatic heart disease is synonymous with the problem of rheumatism.

The etiology of rheumatic fever is still a ques-

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tion. The known facts are few; the hypotheses are many, but an enormous amount of research in the last thirty years has gradually shed some light on the subject.

The disease occurs in about two per cent of all children of school age. It is a disease of the temperate zone and occurs most frequently in cold, damp weather. The incidence is greatest between the ages of seven and nine and it is somewhat more common in girls than in boys. It occurs more often in cities than in rural communities. Rheumatic disease has a higher family incidence than tuberculosis. There is no relation between the incidence of rheumatism and poverty. Evidences of contagion are suggestive, but not conclusive. The influence of numerous other environmental factors has not been evaluated.

It is the consensus of opinion that rheumatic fever is an infection and the atrium of infection is the nasopharynx. Poynton and Paine,[2] Small,[3] Birkhaug[7] and others contend that the disease is due to a specific streptococcus. Streptococci have been recovered from the pharynx, the joint cavities, the heart valves, the pericardial fluid and the blood stream. Small[3] has given the organism the name Streptococcus Cardio-arthritidis. It has specific cultural characteristics, it possesses a soluble toxin, and produces antitoxin when injected into humans and animals. The organism injected into animals produces clinical rheumatic fever and according to Small[3] and Coombs,[1] the experimental lesions are similar in essential respects to those of rheumatic carditis. Skin tests with the toxin give a higher proportion of positive reactions than a similar series of non-rheumatic controls.

Numerous workers have failed to substantiate the evidence that rheumatic infection is a bacteremia. Coburn,[4] in a recent monograph based on several thousand rheumatic patients, recovered no organism from the blood stream that appeared to bear any etiologic relationship. He concluded that the rheumatic process is a special type of tissue response to chemical substances arising from disease of the upper respiratory tract, and that the offending organism in the throat is the streptococcus hemolyticus.

To explain the inherent susceptibility of certain individuals to rheumatic disease, Swift[5] has proposed the theory of allergy. By a persistent low grade infection or repeated acute infections of the upper respiratory tract with a specific strain of streptococcus, the individual becomes hypersensitive to that organism. It is the hypersensitive individual who develops the rheumatic state following an acute infection of the nasopharynx. Individuals with rheumatic fever react strongly to nucleoproteins of all types of streptococci. Lancefield[6] has shown that the protein fraction is antigenic and that the various strains of hemolytic and non-hemolytic streptococci have a large protein fraction in common. Wilson,[8] in the clinical use of skin reactions, concludes that the reactions depend more on the state of hypersensitiveness than on the specificity of the organism. Chadwick has shown that twenty-eight per cent of school children have a positive tuberculin reaction but relatively few develop clinical evidence of disease. Likewise many individuals who show hypersensitiveness to streptococci never develop rheumatic fever. Opie and others have demonstrated the allergic nature of the tissue reaction to tubercle bacilli, and the pathologic processes in rheumatic infection are essentially proliferative, as they are in tuberculosis. Swift concludes that the Aschoff body is analogous with the tubercle.

After a study of the different concepts of the etiology one concludes that the specific etiologic agent has not been demonstrated conclusively. The theory of bacterial allergy is attractive.

The characteristic anatomic lesion in rheumatic carditis is the submiliary nodule which is not found in any other type of cardiac infection. It occurs typically in the myocardium but is found in the endocardium, pericardium, aorta, subcutaneous tissues, synovial membranes and pia mater. The nodule is a small nest containing large multi-nucleated cells derived from the endothelium, imbedded in fibrin, and surrounded by fibroblasts, plasma cells, and lymphocytes. In the early stage the exudation of plasma cells and lymphocytes obscures the fundamental proliferative nature of the lesions. Coombs[1] and MacCallum[9] present convincing arguments to show that the endocardial changes are primarily interstitial. Subendothelial hyperplasia of blood vessels and fibroblasts, exudation of lymphocytes, and the formation of submiliary nodules occur before endothelial proliferation, fibrinous deposit and the formation of vegetations. Cicatrization results from the proliferative changes, producing the lesions found in mitral stenosis, etc.

Rheumatic fever is protean in its manifestations. In childhood it is usually insidious in its onset. It is characterized by recurrent periods of activity separated by intervals of calm and with each successive exacerbation the probability of further cardiac damage is increased. The picture of the rheumatic state in childhood is not the adult picture and it is because the early manifestations are mild that the diagnosis is often not made until irreparable cardiac damage has occurred.

Wilson,[10] in a series of 500 children with rheumatic infection studied over a period of ten years, found evidence of rheumatic heart disease in 45

per cent. Tonsillitis occurred in 42 per cent; polyarthritis in 65 per cent; growing pains in 67 per cent, in 10 per cent of which carditis developed without other manifestations; chorea occurred in 42 per cent; subcutaneous nodules in 14 per cent. Thus, in a great majority of patients with rheumatic carditis, one finds antecedent or concurrent polyarthritis, chorea, subcutaneous nodes or tonsillitis.

The general symptoms in childhood which lead us to suspect the presence of an active involvement of the heart are fatigue, loss of weight, pallor, anorexia and epistaxis. Fever is a very important symptom, it is usually mild except in the more severe grades of active carditis and it may occur in short bouts or be sustained for weeks. Numerous clinicians have called attention to the frequency of various skin eruptions during the active stage. Dyspnea, cyanosis, pain and edema in advanced cardiac disease are essentially the same as found in similar adult conditions. Thus, with the exception of rheumatic stigmata, the symptomatology of carditis is that of any prolonged infection of childhood, so that a careful examination of the heart is necessary to determine whether or not it has become involved.

The first and certainly one of the most important points is to decide if there is cardiac enlargement. This is best judged by the position of the apex beat. Palpation determines the left limit of apical pulsation and the point of maximum impulse. In children the left limit of palpability corresponds very closely to the left border. It is well to remember that in infants and small children the maximum impulse is outside the mamillary line, at four to six years it has moved to the nipple, and after six years it is well within the nipple in the fourth or fifth space. The habitus of the individual also influences the position of the apex. Displacement of the heart from other conditions must be carefully excluded.

Next, one should distinguish any abnormality of cardiac action. Tachycardia is invariably present in active carditis. It is out of proportion with the temperature and persists after the patient is afebrile. One of the most reliable methods of determining the condition of the myocardium is by the response to exercise, as in the hop test. The normal heart will return to its original rate in two minutes. Also by palpation one may detect the forceful thrust of the hypertrophied heart or the diffuse, weak pulsation of the dilated organ. Significant disturbances of rhythm in childhood are uncommon. Sinus arrythmia is almost the rule and extra systoles are not infrequent in normal children. Auricular fibrillation occurs occasionally in advanced rheumatic carditis.

Having determined the size and action of the heart, one should look for alterations in the quality and intensity of the sounds at the various valve areas. One must not forget that the pulmonic second is normally accentuated in childhood. A third heart sound at the apex is found in normal children and must not be mistaken for a presystolic murmur.

The next step in the chain of evidence is to determine if a significant murmur is present. In search of murmurs the patient must be examined standing, as well as in the recumbent position, or many murmurs will be missed. It must be remembered, however, that the presence of a murmur is not essential in the picture of rheumatic carditis. We recently had such a case in a six year old boy who never developed a murmur although he presented all of the other typical features. On the other hand, in the routine examination of perfectly normal children it is common to encounter murmurs that cannot be ascribed to organic heart disease, so that the mere presence of a bruit does not mean that the child has organic heart disease.

The common functional murmurs which are not associated with evidences of myocardial damage are:

1. A musical functional murmur heard just within the apex and often encountered in well-nourished children under ten years of age. The murmur is short, musical in quality and not transmitted.

2. A systolic murmur at the base, which disappears on change of posture. This is the so-called hemic murmur and is frequently found in the tall, slender, pale child.

3. Febrile murmurs which are common in children with high temperatures. They are systolic, not transmitted, and usually disappear with the cessation of fever.

Those murmurs which give definite evidence of acquired heart disease are the apical, presystolic murmur of mitral stenosis and the diastolic bruit heard at the left sternal border in the third and fourth spaces, characteristic of aortic insufficiency.

Certainly the most common murmur detected in early rheumatic heart disease is the systolic murmur at the apex. If in the course of a rheumatic infection one detects a mere roughening of the first tone at the apex which develops into a definite bruit that is transmitted to the left, and other evidences of organic disease are present, one is entitled to diagnose carditis with mitral insufficiency. In many patients with a systolic murmur at the apex an immediate diagnosis cannot be made and such individuals should be considered possible or probable cases of heart disease, and

kept under observation for a considerable period until a definite decision can be made.

The presence of a pericardial friction rub is a most important diagnostic sign. Coombs[1] found clinical evidence of pericarditis in 13 per cent of his cases. At autopsy, however, he found pathologic evidence in practically every patient under twenty years of age. The same author states that a measurable amount of pericardial fluid is found in less than 10 per cent of cases, the average being three to four ounces. This indicates the inadvisability of paracentesis.

Having attained an accurate history and after a thorough physical examination there are certain laboratory procedures which are helpful in making a diagnosis of active carditis.

The leukocyte count is invariably increased in rheumatic fever and with the subsidence of the rheumatic phenomena, a continued leukocytosis suggests active carditis. In the course of a known rheumatic heart infection the white count is of considerable value in determining the actual condition of the child. A mild secondary anemia is usually present.

X-ray, by use of the two-meter film, determines the size and shape of the heart. Max Seham,[11] in a large series of cases, has found the esophagram of real value in diagnosis. In rheumatic heart disease the esophagus, visualized with barium, is displaced by the dilated left atrium. Congenital or other cardiac conditions do not produce this picture and it is not found in patients with normal hearts.

The electrocardiagram reveals an elongation of the P-R interval in active carditis. According to Swift,[5] this evidence of delayed conduction was found in 90 per cent of a series of patients with acute rheumatic fever, indicating that some myocardial damage occurs in practically every rheumatic infection.

The diagnosis of rheumatic heart disease places the patient in one of three categories:

1. Organic heart disease, with or without active infection.

2. Potential heart disease in patients without evidence of circulatory disease, but with a history of the rheumatic state.

3. Possible heart disease in those individuals showing abnormal symptoms or signs, but in whom the diagnosis of organic disease is uncertain.

Certain congenital abnormalities, such as septal defects or patent ductus arteriosus are at times differentiated with difficulty. The age of the patient, the absence of an etiologic history, the character and distribution of the murmur are the most dependable evidences.

After diagnosing the condition as one of active rheumatic carditis the treatment presents two distinct problems.

The management in the acute stage is the immediate issue. Certainly the most important therapeutic measure is complete bed rest until all evidence of activity has ceased. This usually requires months. Geoffrey Bourne[16] advises that the patient be kept in bed for two months after the disappearance of the last sign of activity. Gradual resumption of activity is allowed only if certain definite criteria are fulfilled, most important of which are the absence of fever, a pulse which responds normally to functional tests, a satisfactory gain in weight, and a normal blood count. During this period of bed rest one of the chief objects in treatment is an improvement in the nutrition of the individual by an adequate balanced diet. The administration of cod-liver oil and exposure to the sun's rays may be of value. The nutritional state is an excellent yardstick in estimating the progress of the case. Sodium salicylate is of tremendous help in the alleviation of symptoms and in the control of fever, but it is not a cure. It should be given in sufficient dosage and continued as long as evidence of activity persists. Many clinicians advise its use at intervals for several years. Specific serum therapy, as used by Small, is still in the experimental stage and its specificity is questioned. In congestive heart failure the patient should be digitalized by the Eggleston or some equally effective method.

After successfully bringing a patient through the first attack of rheumatic carditis we should consider the disease as arrested, but not cured until several years have elapsed without recurrence.

It is the elimination of relapses in the arrested cardiac patient and the prevention of carditis in the potential cardiac patient that constitute the principal and most difficult problem. The average child can withstand one attack but each additional rheumatic bout means added cardiac damage and a poorer prognosis.

Since the atrium of infection is the nasopharynx, alveolar abscesses should be drained. Infections of the accessory nasal sinuses should be treated. Infected tonsils should be removed during the inactive stage. Tonsils are judged by their appearance, the history of throat infections, and the presence of an associated lymphadenitis. Kaiser,[12] Wilson,[13] Hill,[14] and others have shown that tonsillectomy is not the solution of the rheumatic problem, for practically as many recurrences take place in the group with tonsils removed as in the group without tonsillectomy, so that the removal of tonsils in all rheumatic children, regardless of

the condition of the throat, is not justifiable. Wilson[13] is the author of the statement that at nine years a child will have suffered as many attacks of rheumatism as it will experience in subsequent years and this is true whether or not the tonsils have been removed. Reginald Miller believes that the virulence of the infection is lowered by tonsillectomy, even though the incidence of recurrences is not altered. According to Kaiser,[12] Kerley,[15] and others, it is the potential rheumatic child, who has recurrent tonsillitis, who is tried, and who experiences growing and joint pains, who benefits most from tonsillectomy.

Inasmuch as the removal of tonsils does not guarantee immunity, the safest plan of management is a change of residence to the west or south during the winter and spring for several years. It has been our experience that the children who have been able to do this have escaped with the least heart damage.

Those children who for economic or other reasons must remain in this climate, require the most complete and cooperative understanding on the part of parents and physicians if they are to escape becoming cardiac cripples. An optimum state of nutrition must be maintained. Fatigue must not be allowed. School should be sacrificed during the winter and spring months when epidemics of respiratory infection prevail in crowded school rooms. No respiratory infection is too mild to require bed rest for the rheumatic child until all danger is safely past. Physical examination by the physician should be the monthly routine. Where available, the cardiac clinic and convalescent home should be utilized.

CONCLUSIONS

1. Carditis is not a complication but is a common manifestation of rheumatic infection. It is one of the most serious diseases of mankind. It has its inception in childhood, it is recurrent, and it frequently results in death or in invalidism in the prime of life.

2. At the present time there is no universal agreement as to the exact cause of rheumatic infection. Swift's concept of bacterial allergy has much to recommend it.

3. The specific anatomic lesion is the submiliary nodule.

4. The symptoms of carditis in children are frequently so benign that serious damage often occurs before the disease is recognized. The diagnosis must correlate rheumatic symptoms with a careful examination of the heart, giving particular attention to the pulse rate, the size of the heart, the functional capacity of the myocardium, and the presence of significant adventitious sounds.

5. The object of treatment in the acute stage is the prevention of crippling cardiac damage. This is best accomplished by absolute bed rest until all signs of active infection have subsided.

6. If progress is to be made in the control of rheumatic carditis it must come through organized effort. Physicians must train themselves to recognize the rheumatic state in its incipiency in order that preventive measures may be instituted at the earliest possible opportunity.

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Discussion

Dr. Julian D. Boyd, Iowa City—Dr. Kelly has given us a clear picture of one of the tragedies of medicine. Probably every practitioner has had the experience of seeing a patient develop cardiac disease while under his observation, and the condition become progressively worse in spite of the best methods of treatment which he could use.

Our treatment for cardiac disease for the heart disease which comes from rheumatic fever, is chiefly an effort to conserve the function of a heart which is already damaged. Our success has left much to be desired.

It seems to me that if we are to accomplish anything in the prevention of heart disease and check the inroads which heart disease is making in the health of our patients, we must begin at an early stage of the condition. We must realize that a patient who has any of the rheumatic manifestations whatever must be treated as though he already has disease of the heart. We may be able to begin even earlier, if we can educate parents to the necessity and the value of periodic health examinations for children who appear well; if we as physicians will train ourselves to think, not in terms of illness as compared with absence of illness, but in terms of the optimum health which the child is capable of achieving; if we can realize that the state of nutrition, the susceptibility to infection and the presence of persistent foci of infection are probably the factors which predetermine the susceptibility of the child to rheumatic fever. If those things can be accomplished, I believe we will go far toward checking the progress of rheumatic heart disease.

Dr. Roland W. Stahr, Fort Dodge—Dr. Kelly, I believe, has given you a very clear-cut idea of our present concept of rheumatism. It seems to me that the thing we can learn from this paper is primarily this: that every month you and I see a child with rheumatic disease, and perhaps we forget that the polyarthritis is not the only thing that this youngster has when he shows the one evidence of rheumatic disease. We forget that this rheumatic infection is a disease which is insidious, which is treacherous, and which is constitutional.

I think there is little more that can be said about this subject, but I would urge that every one of you, when Dr. Kelly's paper is published in the JOURNAL, take a little time to go over it again, because in it there is much food for thought.

METHODS OF DIAGNOSIS*

ELI GRIMES, M.D., Des Moines

Is diagnosis a definite and distinct science? If it is, what are the fundamental underlying principles that make it such? Is it an art which depends, as all arts do, upon observation and unconscious creative power and ability to express?

The correct answer to these questions can be reached only by an analysis of the steps necessary in making a diagnosis. Diagnosis, if it is anything, if it is to stand as a distinct and individual science, must be based on the same principles which underlie every science.

> "A science is a science, not in virtue of the things with which it is concerned, but rather in virtue of the logical method by which it pursues knowledge."

Diagnosis is a science, and there are methods which are definitely the expression of scientific processes and reason. In order to clarify this proposition a few incidents or cases will be given.

CASE I

The patient was a traveling salesman, aged forty-one, native born, married, his wife living and in good health, with three children living, all in good health. His family history was negative; his parents were both living. He was the oldest of four children, and had three brothers and sisters living. He was never exposed to tuberculosis.

Habits of Life. His diet was standard; that is, he ate an abundance of fruits and vegetables, with meat in moderation. If there was any excess it was in the use of milk and cream. He used no alcohol, tobacco only in moderation, and worked hard. He drove a car in his business, averaging 150 miles a day. He always turned in a big business, and had been rewarded by his company for standing at the head of his department.

Medical and Surgical History. As far as he knew, his infancy was not unusual, his childhood was uneventful, and the diseases incident to that age were mild. He never had diphtheria, tonsillitis or rheumatism. He rarely found it necessary to consult a dentist. He was never subject to colds until the onset of the present condition.

Present Condition. Dating from an attack of influenza in 1918 he began to suffer from colds and protracted cough. These had grown worse and of late the cough had developed asthmatic symptoms. There was a progressive weakness, with dizzy spells, transitory but very annoying. He had not lost weight, weiged 190 pounds, was six feet tall, of ruddy complexion.

Chief Complaint. Asthmatic cough and progressive weakness.

Cross Examination. Are these periods of coughs initiated by a cold in the head or common colds? *No.*

The attacks came on without any evidence of bad colds; therefore, the cough was not an acute infection of the respiratory tract. Chronic bronchitis might run such a course.

When is the asthma worse? *At night; in fact it is almost always present at night, often awakening me from sleep.*

How long do these attacks last? *Fifteen to thirty minutes.*

Are they brought on by catching cold *No.*

Do you cough during the attack? *No.*

Therefore, these attacks of asthma were paroxysms of dyspnea, not asthma at all, and it was noticed that while talking he took many deep breaths, so his breathing was irregular.

How about your dizzy spells? *Oh, they come on at any time, more apt to occur when up and about, but do come on when resting.*

Are they related to any particular movements of the body, such as walking, lifting, going upstairs, etc.? *No, they come on when certain things are done, but not always; there is no one thing that causes them.*

Therefore, these attacks of vertigo were not aural, as seen in head infections, arteriosclerosis, etc. They were not related to taking food; hence were not due to hyperacidity as sometimes happens. They must have been circulatory.

You complain of weakness? *Yes, very much.*

Is this weakness only during the period when you have your bronchitis and cough? *No, I am weak when I do not have colds.*

How do you feel your weakness; are you short of breath? *Yes, very, but this shortness of breath is not as bad as the sense of disability.*

Do you feel sick? *No.*

* Presented before the Seventy-ninth Annual Session, Iowa State Medical Society, Marshalltown, May 14, 15, 16, 1930.

Then it is a sense of inability rather than disability? *Yes, that is exactly the case.*

How about your weight? *Have gained six pounds in spite of a strict diet. Have been trying to reduce but have gained. Believe that the weakness is partly due to lack of food.*

He looked puffy. It might be nephritis as this causes gain in weight and breathlessness. The effort of undressing caused him to take a few deep breaths and his lips became slightly cyanotic. The dyspnea of nephritis is a chemical thing and does not cause cyanosis, but a pinking. Dyspnea of heart origin is a mechanical thing and causes cyanosis; so this was not nephritis and must have been circulatory.

Hypothetical Diagnosis. Heart failure.

Analysis. Severe cough is often due to chronic heart failure, especially myocarditis. No other cause for the cough was apparent, so it must have been myocarditis. In endocarditis, paroxysms of dyspnea are brought on by effort; in myocarditis they are induced by effort but also come on at rest even when the patient is asleep. Therefore it must have been myocarditis.

Irregular breathing comes on in all types of heart failure. In endocarditis it comes on only very late; in myocarditis it comes on early. This man had irregular breathing, so it must have been myocarditis.

Irregular spells of vertigo not corresponding to any particular type are present in most cases of myocarditis. Weakness is present in all types of heart failure. In endocarditis it is overshadowed by breathlessness; in myocarditis the weakness is more pronounced in the patient's sensation than in the breathlessness.

This man complained more of weakness than breathlessness, although the dyspnea was profound. It was noted as he sat with his hand on the back of the chair, above the angle of Louis, that the well marked veins in the hand did not collapse; therefore, he had back venous pressure which always means grave cardiac lesions.

So much for induction. The only deduction that could be made was myocarditis, with beginning last stage of heart failure.

Prognosis. Absolutely bad.

Considering the rapidity with which the disease had progressed in the last six weeks it was evident that he was growing progressively worse, in spite of rest and diet. At such a rate he had less than six months to live.

He died four months later with all signs and symptoms of heart failure.

Case II

A school girl, aged twelve, was native born. Family history: parents living, in good health. Her father was fifty-two years old and a country merchant of long-lived stock. He was the oldest of six children, all still living and in good health. None of them had been sickly in childhood. The mother was forty-eight and in good health. She was the fifth of nine children, four of whom had died in early life of rheumatism and heart trouble. She never considered herself strong but had had no serious sickness since childhood. She had St. Vitus' dance in girlhood. The patient was the third of four children, all in good health. The oldest one, however, had rheumatism and chorea several years ago.

Medical and Surgical History. There was no history of scarlet fever, diphtheria, or rheumatism. The patient had had a tonsil and adenoid operation at five, was in good health, normal weight, and had a good average in school.

Present Condition. Six months earlier she had influenza and was sick for one month before she could return to school. She had much cough and lost weight. Her convalescence was slow. After she returned to school the school nurse found a rapid pulse and sent her to her family physician who made a diagnosis of heart disease and put her to bed. She had been in bed six weeks when she came under observation.

Chief Complaint. Persistent rapid pulse.

Cross Examination. Did she seem weak and languid just before the heart disease was discovered? *No. She was very active and was doing well in school. She would jump the rope one hundred times without stopping.*

Has she regained any of her lost weight? *Yes, she has gained nine pounds in six months.*

Does she eat and sleep well? *Yes, eats heartily of everything and sleeps from nine to ten hours at night.*

When is the pulse rapid? *All the time, from 120 to 180.*

Is it rapid when at rest? *Yes, at night while sleeping it runs to 150.*

Did you ever find it slow? *Yes, on one occasion it was found to be 80.*

When was this? *Just after supper.*

Since your oldest child had St. Vitus' dance, you know what it is? *Yes, I remember having had it myself.*

Did this child have St. Vitus' dance when getting over influenza? *No, but she was threatened with it.*

What do you mean by threatened with it? *Oh, she rolled her eyes in a funny way, but got over it in a week or two.*

Analysis. A girl of twelve, of a family prone to rheumatism and chorea, suffered from an infection of the respiratory tract six or seven months ago. The attack was protracted and she became very much exhausted and showed positive evidence of chorea. The convalescence was slow but uneventful. She regained her strength and weight and mental vigor, but was found to have a pulse of 150 to 180 night and day. There was no evidence of exhaustion. A rapid pulse was caused by hyperthyroidism, but in a young girl a pulse of 180 due to hyperthroidism would invariably be associated with a loss of weight. This girl had been gaining weight; therefore it was not hyperthroidism. She did not have a rapid pulse until after she was sick. She had chorea. Chorea is often associated with a heart lesion. This might be such a lesion. A heart lesion that would cause a pulse of 180 when lying down would be so serious that the patient could not be up, because if a rate of 180 were necessary to maintain the circulation on lying down, the demand would be so great on being up and about that there would be grave evidence of heart failure in the way of dyspnea and cyanosis. If a patient without edema or cyanosis or dyspnea has a heart lesion that will cause a pulse of 180 when up and about he will have a normal pulse when lying down, a simple, self-evident physiologic fact, barring, of course, the arrhythmias. A heart patient who has a rapid pulse at rest is in an advanced stage of failure, and will have marked edema, enlarged liver, hydrothorax, cyanosis, air hunger, etc., and be unable to be up and about. Therefore, this child did not have a heart lesion. The higher centers of the voluntary muscles are involved in chorea and the higher centers of the heart can likewise be involved; therefore, this child had chorea of the heart without heart lesion.

Diagnosis by Deduction. Chorea of the heart.

The verification was complete. The child was sent back to school and resumed physical and mental activities, was given salicylates and arsenic, and returned in three weeks with a normal pulse. She has indulged in all sorts of physical activities, such as jumping rope and chasing the cat.

CASE III

An attorney, native born, married, was fifty-two years of age. His family history was negative. Habits of life: he worked hard, used no alcohol, his domestic relations were happy, his financial affairs were good.

Medical and Surgical History. Negative. He had had no serious illness, and no operations.

Present Condition. One year before examination he was awakened one night by a feeling of extreme oppression in his chest associated with pain which he described as a crushing sensation on his breast bone and a sharp pain in the left shoulder and arm. He became terrorized and thought he was dying. His wife, who was present, said he became ashen, broke out in a profuse perspiration and vomited, and the attack promptly passed off. He consulted a physician the next day who said that it might have been an attack of acute indigestion, but was not positive. He cautioned him about eating too heartily, especially the evening meal, to avoid for a time all physical exertion, and to note any unusual sensation he might have in his chest or stomach. The paitent felt well and had no recurrence for three months, when he was seized with a similar attack while sleeping. He again consulted his physician, who made a diagnosis of angina. He was put on a very restricted regimen, and given potassium iodin. For six months he had no further attacks, but for the next three months the spells came on two or three times a week, always at night, and very much the same. They came on during sleep, with a clutching pain in the chest, felt more in the sternum, and excruciating pain in the left arm and shoulder. He would become terrorized and break out in a profuse perspiration; there no longer was vomiting or nausea.

Cross Examination. What time in the night do these spells come? *Just on going to sleep, before eleven.*

Are you sure they are not brought on by something you have eaten? *Yes, this has been carefully studied.*

Are they more apt to come on when you are tired? *No, I was in bed three days and they came every night. Began to take long leisurely walks and they come only every three or four days.*

While walking do you have sudden short spells of shortness of breath? *No.*

While walking do you have any pain or discomfort? *No.*

Are you ever conscious of your heart beating fast or hard or irregularly? *No, only once in a while I feel my heart skip a beat. It has done this for years. I once talked to a doctor about it and he told me to forget it.*

Are these skipped beats more frequent of late? *I believe they are but they do not annoy me.*

Are you worried over your condition? *Yes, three doctors have told me that I have angina and I know what that is.*

Analysis. A man aged fifty-two with no evidence of heart disease, had angina-like attacks at night. There was no evidence whatever of symptoms during the day, not even the transitory spells of shortness of breath which angina patients are

prone to have. There are types of angina that come on at night, very severe and often fatal. There is a type of angina that comes on only at night. How can this man be classified?

As regards the time angina is manifest we must think of it as showing three types: (1) The angina of effort that comes on in the day; (2) the anigna that comes on in the day, but has the most severe paroxysms at night; (3) the angina that comes on at night only.

We must deal first with this last type. There are patients with advanced heart failure who have severe attacks of angina at night, the nocturnal dyspnea taking an angina-form character. This man had no evidence of heart failure, hence, this type was definitely ruled out.

There is a nocturnal angina that comes to those with no evidence of heart failure, the attacks are severe and often fatal, but they may persist over a long period of time. Two facts must be kept in mind in studying this type: (1) This type is a delayed angina of effort, and is due to some event or events of the preceding day, such as error of diet, physical overexertion, or mental stress. If the patient is kept in bed on a restricted diet the attacks do not recur till there is other evidence of cardiac degeneration. (2) If the patient survives for a time, definite symptoms always develop of effort angina, painful paresthesia of the shoulder and arm, substernal pain on effort, and beginning dyspnea. That is genuine nocturnal angina, or angina of decubitis of the French writers. It is a delayed angina of effort, the effort having taken place the day before, and if this angina persists there will invariably be frank, though not necessarily severe, symptoms of angina during the day in the way of substernal pain on effort, or fleeting spells of dyspnea or vertigo.

This man had no symptoms during the day, hence it was not frank angina with the major paroxysms at night. He had nocturnal attacks that grew progressively more frequent. He had had these attacks for one year and had not developed symptoms during the efforts of the day; hence, it was unlikely that it was angina of rest. More important was the fact that the attacks occurred more frequently when he rested than when he exercised during the day, which ruled out nocturnal angina.

Therefore, he did not have angina.

There is only one heart disorder that is more pronounced during or after periods of rest, and that is premature beats. This man had had premature beats for years. Premature beats in some cases come on in showers with all the subjective symptoms of angina. The deduction, then, was a diagnosis of *paroxysms of premature beats with angina-form symptoms.*

The verification was complete. He was given two grains of quinidin sulphate after each meal and on retiring, with immediate and complete cessation of attacks. After taking this in diminishing doses for three months without recurrence he discontinued it for a period of about a month and suffered a mild attack. He was again put on quinidin and had no further attacks, and he has been taking two grains a day for almost a year without recurrence. He walks two miles to his office every day, works hard and plays golf on Sundays and holidays.

Case IV

A woman, aged forty-two, married, unoccupied, had a negative family and personal history. Two years before examination she began to have backache which grew progressively worse, so much so that she was almost incapacitated from performing the limited duties of the day. She lived in a hotel and had nothing to do but eat and sleep and look after her wardrobe.

Direct Examination. Have you had tonsillitis? *No.*

Have you had a great deal of dental work done? *No, my teeth are in perfect condition, and my tonsils were removed at the beginning of my sickness.*

Have you taken a great deal of medicine? *Yes, I have been doping for two years, but now it seems that nothing does me any good.*

Previous to this illness you had never had a surgical operation? *None, but my uterus was removed a year and a half ago for a small fibroid. I was told that this was what was causing my backache.*

Were you better after the operation? *No.*

What other treatment did you have? *A stomach specialist drained my gall-bladder with a tube down my throat. I took about twenty of these treatments.*

Did they make you feel better? *No, worse.*

What else have you done? *Had osteopathy, chiropractic, and light treatments. I also had a lot of shots of vaccine the doctor called it, but they did no good.*

When are these backaches the worst, on exercise? *No, that sometimes gives me relief. They are worse at night, in fact, always at night.*

Analysis. The causes of backache are: first, muscular rheumatism, which is a variable thing and changes with the thermometer and barometer. Second, there is spinal arthritis that is worse on exercise, worse as the day goes by, worse on becoming fatigued, and not so pronounced at night.

Third, there is the postural back due to pendulous abdomen, and the backache of flat feet, and last and rather infrequent, is the backache due to pelvic abnormalities. This particular trouble is subject to definite variations related to the menstrual periods. This patient's backache was not of the muscular rheumatism type because it had no variations; it was not spinal arthritis because work and exercise did not make it worse; it was not due to a pendulous abdomen; it was not due to flat feet; and it was not due to pelvic trouble. If the surgeon who cut out the uterus would have reflected on the natural history of a pelvic backache he would not have operated, except for the $250.00, which the patient said he removed.

Cross Examination. How old were you when you married? *Sixteen.* (I made a note of this; marriages at sixteen are rarely permanent.)

Then you are not living with your first husband? *No, who told you?*

What did you do with him. *I divorced him.*

Why? *Oh, just because he was a ne'er-do-well.*

Anything else? *No.*

Were you ever suspicious that he had a venereal disease? *No.*

You say you were never pregnant? *Never.*

Were you ever suspicious that you had miscarriages while living with your first husband? *Well, on two or three occasions the doctor said they might have been miscarriages, but he did not know for sure.* (I made a note of this.)

After leaving your first husband and up to the time this backache came on were you in perfect health? *Yes.*

Deduction. Sad to relate, early marriages are frequently associated with venereal diseases. This woman married early. She undoubtedly had three spontaneous miscarriages. She had a backache that corresponded to but one type, and that was a backache which was worse at night, uninfluenced by climatic changes, uninfluenced by exercise, and not dependent upon postural condition. When the apparent causes of backache are eliminated fifty per cent of the remaining cases are syphilitic. No other diagnosis could be made but syphilitic backache. She was given 60 miligrams of neosalvarsan at the first consultation, and the backache ceased immediately and permanently. The Wassermann blood test was negative, but after three months' treatment it was positive. At the present time, five years after treatment, this patient is enjoying perfect health.

Methods of Diagnosis

The first requisite is a knowledge of clinical anatomy and the natural history of disease. These are the fundamentals of medical education and are presumed to be mastered before attempting diagnosis or any other branch of medicine.

In the correct diagnosis of a case the history is the major part of the examination, and eliciting the history is a fine and difficult art. Get the story of the life of the patient, with whom he has associated, the history of his father and mother, brothers and sisters, uncles and aunts, and grandparents, etc., his numerical place in the family, his work and play, his habits and his passions, when and how often married. The woman patient tells you she is married. Remember that with many women husbands come and go and become a sort of habit, so do not hesitate to ask her if she has husband number one, two or three. A woman may tell you that she never was pregnant, but on cross examination you may discover that she has had a half dozen miscarriages. Analyze the story of every illness, master the logical rules of concomitant variation. If you cannot do this you will miss the mark. Of the physical examination, simple inspection is the most important part, but the crux of the whole thing is constructive thinking.

Diagnosis is an inference, not an observation. If a diagnosis or inference is to be accepted as a fact it must stand the test of validity. It is important, then, that we understand just what sort of an inference we have made and what are the necessary steps of reasoning to establish its verification. Every diagnosis can be verified clinically and logically. Simple analogy, whether it be by direct observation or produced by laboratory technicalities, is unreliable and illogical. Every diagnosis in order to be scientifically accurate must be a deduction, and a deduction implies the power to make an induction.

There are three systems of thought: analogy, induction and deduction. There are four systems of logical thinking: First, the mathematical, the reasoning of which depends upon the self-evident relation of numbers and quantities. Second, the empirical system is based upon empirical facts, facts that are accepted as facts for which there is no explanation, and hence are called empirical. These are facts of chemistry, facts of physiology, facts of biology, from which as far as human knowledge goes there is no departure, and it is from these that we begin hypotheses. We make an hypothesis of something that is not self-evident, but is still correct because it rests upon well known facts. We make another hypothesis concerning the same phenomenon and then another and another and we construct a theory. A theory, then, is a completed result of verified hypotheses, and it is arrived at by induction. This is inductive reasoning. From theory a correct deduc-

tion can be made; if it is incorrect, false hypotheses have entered into our induction. Third, there is a method of arriving at conclusions which is called explanatory. This is made by building up inductions from deductions, and back again. Its place is in those problems with the possibility of but a few hypotheses. Fourth, there are hypotheses which stand alone as simple inferences. Such an hypothesis must not be taken as a conclusion or a fact until it is verified. This method of arriving at conclusions is called the verification method. The principles of empirical reasoning are those that apply in diagnosis as a rule, and this method should be mastered in the abstract. This includes the greatest logical principle of thought around which entire volumes of philosophy have been written, the principle of presence, absence and concomitant variation. It is this principle of thought and this alone that has advanced chemistry, physics, astronomy and biology, so why not medicine? The only limit to hypothesis is the limit of imagination, but such is the starting point. Start with an hypothesis that is not absurd, build a theory by induction, then your deduction will be correct. It has come about that the advanced idea is to reduce all diagnosis to observation. An individual with an unnatural angulation and mobility in the middle of the humerus has a fracture. This is a diagnosis of simple observation, requiring no thought. It is analogy, a mental process used by animals and babies. Yet this is the only kind of diagnosis that has advanced, the only kind the clinically trained young man is made to master. He knows what a gall-stone and a gastric ulcer look like under the X-ray; he knows what the gonococcus and the tubercle bacillus look like, what high non-protein nitrogen of the blood, and a Wassermann test mean, but, when these things are lacking, when the case requires more than a simple observation, more than simple analogy, he stands hopeless and helpless, and the diagnosis is not made. Because of improper training, and often because of lack of ability it is impossible for him to apply the simple rules of logical thought, the scientific method of reasoning, by which alone all branches of science have advanced, and by which alone science was born. The great majority of cases cannot be reduced to an observation, and those that can as a rule do not need to be.

Get the natural history of every disease the patient claims to have suffered and it will be found that the name given by the patient is usually an error. Almost any kind of a pain is described as rheumatism, and any chest complication is usually called pneumonia. The natural history of his various diseases points the way to a correct diagnosis.

Most of the results of laboratory, and X-ray examinations, etc., are matters of verification and substitutes for reason, and at best applicable to only a small percentage of cases. If you cannot reason, take an X-ray picture or a blood test, or if you cannot think, make an exploratory operation.

In the field of diagnosis there is no greater delusion and snare than the Wassermann reaction. How many cases do you diagnose as syphilitic in the absence of a positive Wassermann test? Think it over, and then study the following statistics:

Thirty-five per cent of syphilis cases have neither a typical lesion nor a positive Wassermann reaction.

Neurosyphilis of the vascular kind, gastric crises, Charcot's joint, trophic ulcer of tabes, brain palsies and gumma, syphilitic epilepsy, spastic paraplegia and non-paretic psychosis, all, in the majority of instances, have negative spinal fluid and negative blood, less than forty per cent being positive.

In syphilitic aneurysm, fifty-seven per cent are positive.

In early syphilis aortitis only forty-three per cent are positive.

Blood and spinal fluid tests are positive in only twenty-five per cent of syphilitic patients over twenty years of age.

The diagnosis, then, is to be made chiefly by history, painstakingly elicited and logically considered.

I should like to leave as a text of this rather incoherent discourse the words of John Stewart Mills, previously quoted:

> "A science is a science, not in virtue of the things with which it is concerned, but rather in virtue of the logical method by which it pursues knowledge."

Discussion

Dr. George B. Crow, Burlington—Mr. Chairman, twenty years ago the diagnosticians were men who depended upon making a diagnosis along the lines just outlined by Dr. Grimes. Along came new methods of studying disease, by means of chemistry, bacteriology and the X-ray, and in the last twenty or twenty-five years the pendulum has swung very largely in their direction, to the neglect of other and still more important methods.

It is refreshing to know that we still have men who think. I am not a logician as is Dr. Grimes; I cannot tell you exactly into what classification my thoughts always fall, as he has done; but whether or not we are able to label our processes of thought, I hope that we are still able to think.

There are three points that I want to emphasize. One is the neglect of case histories. In recent times, with our growth of hospitals and hospital standardization, there has been a tendency to bear down on the point of having a long written history of every patient admitted to the hospital. Many of the doctors are a little loathe to take the time for this, so they hire a clinical clerk who does it, or perhaps they get some young interne and the history taking is left entirely to that individual. That is absolutely wrong. Dr. Grimes has pointed out that the history is often *the* most important aid in making the diagnosis, and if the diagnosis is to be made from the history, then it requires someone skilled in the art of taking a history and of interpreting the various facts elicited therefrom.

Another point that I want to emphasize is the relative importance of various laboratory methods. The laboratory method of diagnosis, I know, has been ridiculed a good deal recently. It should not be. It has its proper place. The microscope, chemical test tube, bacteriologic culture plate and X-ray, all have their uses, but we should remember that they are nothing more than extensions of our natural senses. The mariner at sea has his attention directed to some object on the horizon by the lookout. He picks up the glasses to determine what the object is. His glasses give him a more distinct impression of what he is looking at, a clearer outline. While he is looking at it, however, the ship may run on a rock which is immediately in front of it. In other words, these processes do extend our knowledge, but they narrow our horizon. That is the point I am trying to make; we should make them our servants, not our masters.

Dr. Frank M. Fuller, Keokuk—I think a paper like this should not go by without somebody getting up and at least starting a scrap. I do not mean a scrap; I mean a discussion. One of the things that I have noticed in this meeting more than in any other meeting of the Iowa State Medical Society I have attended is the lack of discussion. One thing from which we all benefit is discussion.

Dr. Grimes has presented here some very interesting and pertinent facts that should make us think. I presume the subject is one that is presented at every meeting of this society. I mean the emphasis on diagnosis, and the emphasis upon those means by which we make a diagnosis. As has been said here by Dr. Crow, in twenty years we have gone through a great evolution of the methods of diagnosis. I have referred in this session to a little book which I prize very highly, it having been in a family of doctors since 1740 and handed down to me and then by me to my son; a book by Dr. Sydenham, the Osler of his day, on the treatment of almost all diseases. Sydenham's method of diagnosis was the diagnosis of observation, the training of sense perceptions, and it was written in 1690 in Latin. He had none of the means of diagnosis which we have today, and yet his methods when analyzed, simple as they were, were true. I have also some very valuable literature published in this state in 1850 by men who were making diagnoses with every evidence of the method that Dr. Grimes has mentioned.

The time is limited for discussion of this sort, but I want to emphasize a fact which Dr. Grimes did not bring out, that we are practicing an art as well as a science. We continuously have presented to us the idea that we are dealing with an individual rather than with a patient, and it therefore becomes absolutely necessary to get before our minds a picture of this individual. Those of us who have patients referred to us very frequently have never heard the name of a patient before he comes into the office or into the hospital for observation. We know nothing about the financial, social, or domestic difficulties of that patient, which very frequently are the cause of the condition that brings our patient to us. So I want to emphasize what Dr. Grimes has said, that we must get the background of every individual. That takes time. As Dr. Crow said, often an interne or a clerk or a nurse who is delegated to get the history, cannot do it, because it takes an hour or an hour and a half to take a careful history. Sometimes it takes two hours in your office work; sometimes you see only two or three patients in a day, but that is the kind of practice that is worth while. If you will see only a few patients, instead of twenty or thirty in a day, as some men boast of doing, and literally make pictures of those patients, you will come nearer making correct diagnoses, and when you ask for the proper fee, you will find your patients perfectly willing to pay you for your time. Therefore it is important to get the proper diagnosis and get at the underlying condition of the patient.

I do not think any of us can define the methods of mental processes that we go through, but I just want to emphasize one thing the essayist said and I want to refer this to our friend the incoming president, and other surgeons: "If you can't think, do an exploratory."

HYDRONEPHROSIS*

H. F. DOLAN, A.B., M.D., F.A.C.S., Anamosa

Hydronephrosis is distention and atrophy of the kidney produced by obstruction in the urinary tract. Obstruction produces pressure above the site and the resultant pathologic change and its progress depend on the location, type and duration of the obstruction. The kidneys are the last organs to be affected in obstructions in the lower tract, and the only organs to be affected in obstructions in the upper tract. Secretion in spite of obstruction is the pathologic physiology.

Man, the biped, is disposed to a great many physical disturbances because of his upright position and these physical disturbances frequently are the precursors of disease conditions. Com-

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parative anatomy reveals the fact that the quadruped is immune to many of these diseases because he walks on all fours and the longitudinal axis of his body parallels the surface of the earth. One example is a comparison of the location of blood volume. In the quadruped we find the majority of blood volume above the level of the heart. In man, in the upright position, we can divide the physical structure into three parts so far as blood volume is concerned. At any one given time we find approximately one-fourth the blood volume in the head and neck, one-fourth in the chest and arms and one-half below the level of the diaphragm. Add gravity, which is constant, to this hydrostatic picture and we have one reason why man is apt to weaken at points of greatest mechanical disadvantage.

As evidence of this are broken arches, varicose veins, hernias, visceroptotic conditions, stove-pipe legs of broken compensation and some of the hydronephrotic kidneys caused by trauma plus the constant effects of gravity and hydrostatic pressure. One of the interesting animals at the circus is the giraffe, its attractive feature being the lack of proximity of head and torso. Its long esophagus renders it vulnerable to physical disturbances and disease. The analogous structure in man is the ureter, the longest duct in the body, which may become obstructed in its course from kidney to bladder.

Hydronephrosis may be congenital or acquired. Congenital hydronephrosis is caused by anatomic anomalies. It may be present at birth, for the kidneys are active for some time in late intrauterine life so that hydronephrosis in the fetus is obstructive in the same sense as in the adult. Among the most frequent causes are congenital atresia, stricture and angulation of urethra, phimosis, diverticula of the bladder, anomalies of the ureter, fetal valve strictures and abnormal positions. Causes within the kidney may be due to anomalies in form, size, position and blood supply. Gerard, in an anatomic study in 1908 of the ureter in the fetus and new-born, showed that the fetal ureter is relatively enormous as compared to the kidney and the size of the body and that it is frequently the seat of kinks and valve-like formations. Normally these valves and kinks disappear shortly after birth, but in some cases their continuation will offer the only explanation for a given hydronephrosis. An anomalous vascular supply to the lower pole of the kidney may encroach on the lumen of the ureter and produce a kinking at the ureteropelvic junction. This mechanical condition is analogous to a kinking due to an abnormally movable kidney and a fixed ureter. An anomalous vessel to the lower pole may have a congenital background. The kidneys develop in the bony pelvis and in the course of their ascent new vessels are formed and old ones obliterated. Anomalous vessels are most probably due to failure of obliteration. These lower pole vessels may by their position make a fence of the ureter.

Acquired hydronephrosis may be due to any cause which interferes mechanically with the free drainage of urine. We have learned to trace many cases of hydronephrosis to some injury, such as a blow over the kidney region, or a fall in the standing position or on the buttocks which often loosens the kidney and causes ptosis, with kinking of the ureter and back pressure. Burford reports bilateral hydronephrosis in several prize fighters caused by so-called kidney punches. Traumas, stones, bands, infections and strictures are frequently precursors of hydronephrosis.

Some cases of hydronephrosis cannot be explained by mechanical obstruction and many cases have been reported with no evidence of obstruction. They are evidently due to a disturbance in the peristalsis of the renal pelvis and ureter. This dynamic type of hydronephrosis may be either congenital, in which case it is idiopathic, or acquired, and in this case it is usually due either to an infectious toxic process in the bladder of long standing or to disturbed innervation of the ureters and renal pelvis. Urinary disturbance in early childhood is clinical evidence of such insufficiency.

The usual type of destruction caused by complete or incomplete obstruction is distention of the pelvis with atrophy of the renal parenchyma. This is pressure atrophy, the pressure producing anemia and gradual destruction of the entire parenchyma. This picture is called hydronephrotic atrophy. There is another type of atrophy called primary atrophy which sometimes follows a complete obstruction resulting in a small atrophic kidney without distention of the pelvis or tubules of the kidney. The end result is the same as if the arterial blood vessels had been ligated.

It has been stated in medical literature that complete ureteral obstruction leads at once to primary renal atrophy without pelvic distention. This is the rare exception and not the rule. Hinman, in his experimental work on animals, has shown that the chief difference between the results following complete and partial obstruction is the period of time relative to the degree of hydronephrotic change. In complete obstruction there is atrophy of the parenchyma and a large, thin-walled sac filled with watery clear fluid. In partial obstruc-

tion much greater hydronephrosis results, but after a much longer period of time.

The deduction to be drawn from these findings is that in the complete block the pressure leads to early interference with the secreting power of the kidney. In the partial and intermittent types of obstruction the kidney can reëstablish secretion during the uninhibited phase. The more extensive hydronephrosis following partial obstruction is due to the fact that the pressure does not lead to early interference with the secreting power of the kidney and the kidney tissue regenerates when the pressure is released; then, when the flow is again interfered with, fresh dilatation takes place. This long-continued repetition of the alternating processes of regeneration and compression accounts for the formation of large sacs. Secretory pressure will gradually and progressively rise during the period of repair.

The pathologic physiology of hydronephrosis is obstruction, pressure, distention, compression, secretion and reabsorption continuing to the point of renal degeneration. Here we find that in spite of two pathologic barriers, obstruction and pressure, the kidney performs to a limited degree the function for which it was ordained by nature; the secretion of urine. This secretion, in spite of obstruction, presupposes an altered pressure in the kidney pelvis and this fluctuation of intrapelvic pressure is due to resorption. Resorption is pathologic and occurs only in a blocked kidney. It plays an important role in the preservation of secretion. The channels of resorption are not clear, although we do know that it must be through the lymphatic, the veins or the tubules. Hinman, through his extensive experimental work, would have us believe that the pyelovenous back-flow explains the pathology of resorption in obstructed kidneys. He has demonstrated a back-flow from the pelvis directly into the small venous radicles at the apices of the minor calyces. In Hinman's experiment none of the injected material was found in the tubular system and there was no extravasation in the parenchyma. If this pyelovenous back-flow occurs in the living obstructed kidney it accounts for the ability of a kidney to continue active but reduced secretion with its ureter completely blocked; however, dead kidneys are less resilient and a 40 m.m. pressure used is a 40 plus pressure. This intrapelvic pressure, not counterbalanced by the secreting pressure in a living kidney, might push back the renal pyramids and permit the media to find a route into an adjacent plexus of venules. Osmosis and trauma may be factors in pyelovenous back-flow, although Hinman found no evidence of a traumatic break.

Another possible route for resorption is the tubular system. Morrison, in his experiments, introduced dye well within the pelvic capacity of the kidney. He precluded the traumatic element by ligating the ureter and establishing an incipient hydronephrosis. He then aspirated the contents of the renal pelvis, measured the amount and introduced half that quantity of dye. The procedure thus aimed at having the dye lying passively in the renal pelvis and obviating as far as possible the factors of positive pressure forcing it into abnormal channels. The findings revealed a marked absorption up to the collecting tubule system and into the convoluted tubules in the cortex. In another series of animals the dye was introduced into a normal renal pelvis and the ureter ligated. These findings revealed an early absorption through the lymphatics; however, after three days the dye was noticed ascending the main collecting tubules at the papilla.

The logical deduction from these findings is a hydronephrosis that has existed long enough to injure the papilla, open the tubular system and establish resorption through this channel. The route of resorption is not clear but we do know that secretion is preserved by lowering intrapelvic pressure. The renal parenchyma is compressed, the tubules are flattened and atrophic, the glomeruli shrunken, and there is evidence of scar tissue replacement. In areas we find compensatory hypertrophy of both tubules and glomeruli. The scar tissue is an organic change and the regenerative power of the kidney depends on the amount of scar tissue replacement.

The manifestations of hydronephrosis vary. It would seem that increased pressure in a highly specialized organ like the kidney would cause certain classic symptoms; however, the pressure is secondary and a result of obstruction. The various factors producing obstruction may in themselves give rise to a definite train of symptoms; no patient ever passed a ureteral stone without showing classic symptoms. An acute total block is frequently manifested in the form of a Dietl's crisis, with symptoms of incarceration, severe cramp-like pains, local and referred, vomiting, perspiration and oliguria. Relief of pain coincident with the passage of a large amount of urine is suggestive. On the other hand, a slow partial block extending over a long period of time might produce a hydronephrosis without symptoms. Evidence of this is not uncommon in benign hypertrophy of the prostate over a period of years. Local and referred pain in the kidney region, and a mass are the usual symptoms. Troubles of micturition are common in the form of frequency, burning and dribbling. The urine may be quantitatively and qualitatively normal, for in cases of

unilateral total occlusion only the normal kidney is furnishing urine. In the intermittent types the urine is usually cloudy, and pus and sporadic erythrocytes may be present in the sediment.

The diagnosis of hydronephrosis is made by the pyelogram when we find the renal pelvis dilated in a characteristic form. The average pelvic capacity is five to ten c.c. but twenty c.c. may well be within normal limits. Amounts beyond this figure injected without producing pain are strongly suggestive of dilatation. Reproduction of pain, when present, is added evidence frequently elicited. A rapid and profuse flow of urine through the catheter when it is introduced into the kidney pelvis is an indication of distention, especially if the composition of the urine is altered. To preclude the possibility of a bilateral hydronephrosis, pyelographs should be made of both sides. The obstruction frequently acts as a barrier to the catheter. This would prevent pyelography and the estimation of the comparative function of the kidneys. Functional tests obtained with the tip of the catheter below the pelvis give a lower reading. Comparative functional estimation is important in determining not only the disability of the suspected kidney, but the integrity of the other.

The treatment of hydronephrosis depends on the cause, the location of the obstruction and the condition of the kidneys. The examiner must determine whether the obstruction is infravesical, vesical or supravesical. He must also determine whether kidney destruction is unilateral, or bilateral, and if unilateral, whether it is early and in the reparable stage or late, with extensive pathology, and if late, whether there is a counterbalance evidenced by hypertrophy and compensation in the other kidney. If destruction is bilateral, he must know the cause and gauge the extent of the process. Interesting experiments on animals and postoperative results on persons should guide us in passing judgment on a crippled kidney.

Hinman has shown that when one kidney has been crippled by hydronephrosis, such a kidney will not resume activity again even if the hydronephrosis is relieved. The cause of this failure he ascribes to the fact that while the one kidney was hydronephrotic the other hypertrophied to compensate for the loss of functioning renal tissue. In the presence of the hypertrophied kidney, stimuli for the resumption of function by the hydronephrotic organ are lacking and such resumption does not take place even though the cause of hydronephrosis is removed. He terms this situation renal counterbalance. He has proved that blocking of a ureter in an animal experimentally causes hydronephrosis on that side, with compensatory hypertrophy of the other kidney. If the ligature about the ureter is removed after hydronephrosis has progressed to a considerable degree, the hydronephrosis remains the same, providing the other kidney is competent to carry on the work. However, if the other kidney is then removed, the urge for greater kidney secretion causes recuperation in the crippled kidney by thickening of the cortex and a marked prolongation of the uriniferous tubules, making more secreting surface. This is what he calls the urge to secrete.

We glean from these experiments the extraordinary adaptation of means to an end found in the organism, the importance of bilateral distribution of functional organs, and the great recuperative power of a crippled kidney when the preservation of life depends on its function. If these deductions were applied to surgery we would feel disposed to remove every hydronephrotic kidney in the presence of a normal kidney on the opposite side.

Quimby has reported brilliant results in his plastic work on hydronephrotic kidneys produced by abnormalities of the renal blood supply. In sixteen cases of unilateral hydronephrosis due to ureteral obstruction by an anamolous vessel, he performed ureteral transplantation. He reports smooth convalescence in all and improved function in the operated kidney. Though as a rule this resumption of function does not go so far as to make the operated kidney again normal, it has always been of such a degree as to make the kidney worth saving.

Here we have two views diametrically opposed concerning the recuperative power of a hydronephrotic kidney, one view supported by animal experimentation, and the other supported by postoperative results on persons. We are inclined towards conservatism and feel that the removal of an obstructing stone or the fixation of a ptotic kidney and the more technical plastic operations should be considered in the early cases, but that a hydronephrotic atrophy procuring symptoms is indication for nephrectomy.

CONCLUSIONS

1. Hydronephrotic atrophy is the usual result following any type of obstruction in the urinary tract. Primary atrophy is the rare exception.

2. Resorption from the blocked pelvis is the pathologic physiology. This factor preserves secretion and prolongs the destructive process.

3. If the destructive process is slow, the patient can get along in apparently good health with very little or almost no kidney tissue at all. This should make us more conservative about removing

hydronephrotic kidneys that are not infected and that are not causing trouble.

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Discussion

Dr. Ora F. Parish, Grinnell: We will all admit that this is an excellent paper and excellently presented, since there is so much to be considered in a subject of this type. The first thing I want to emphasize is the fact that we find these conditions present mostly in people who are below par physically, anatomically and by inheritance. We do not expect to find so much trouble in those who are normal or those who have a rich inheritance and a good physique. They can stand the exacting pressures of living with no resultant symptoms.

The second thing I wish to call attention to is the matter of treating these patients. First we must consider the etiology, and the treatment must be addressed to the etiologic factor or factors.

I feel that twenty minutes is not sufficient time, of course, to give you a clear picture of a subject of this type and immensity, but I want to congratulate the essayist on having presented an excellent picture of something that is highly instructive to those of us who live in the outer territories.

Case Report

UNDULANT FEVER MENINGITIS
(Organism in Spinal Fluid)

W. E. SANDERS, M.D., Des Moines

Within the past few years the Bacillus Brucellus has been grown from the stools, blood, duodenal contents, bile, gall-bladder wall, synovial fluid, the aborted fetus and other possible human media.

Nervous manifestations occurring at some time during the course of the disease have frequently been recorded, but so far as I am aware, no consistent studies of the spinal fluid have been made.

The recently recognized importance of the widespread character of this disease, especially among persons engaged in the care of domestic animals and their products, lends a particular interest to the following case history.

A printer's apprentice, aged twenty-two years, began to fail in health about the end of the year 1930. He had no direct contact with domestic animals, but lived in a district where a few cases of human undulant fever had recently occurred. While attending a picture show he was seized with a feeling of numbness in his right foot which extended rapidly over the entire right side of his body, including the tongue. There was temporary aphasia, but no loss of consciousness. The symptoms lasted for five or ten minutes, and were followed by a headache of several hours' duration.

During the next three months he had a number of similar attacks, although not always on the right side, and never so severe as to keep him from work. On the morning of March 19, 1931, while addressing some mail, he developed a headache and noticed that he could not spell words correctly, although he had no difficulty in writing the letters. He left his work and went home, and by the middle of the afternoon he was semi-stuporous, inarticulate and febrile. His condition remained about the same until the following morning, when I found him with a rigid neck and a positive Kernig reaction.

Fifteen c.c. of slightly cloudy spinal fluid were obtained by puncture, and showed a few extracellular, Gram-negative, pleomorphic organisms, some appearing as small diplococci and others as minute bacilli. The organisms grew well on North's medium. The cell count was over 300, with about 36 per cent lymphocytes. The patient was sent to the hospital and about six hours later I was surprised to find him much relieved and quite rational. Because I suspected a meningococcus meningitis, he was kept under morphin and barbital and given three intraspinal meningococcus serum injections within the next five days, during which time the cell count lowered to about 70 and the cultures and smears became negative. Each successive spinal puncture showed increased pressure.

The hypnotics were discontinued and after a few days, as the patient's intellect cleared, the above history was verified. The cultures of the spinal fluid were reported sterile and discarded after forty-eight hours' observation. A thorough examination showed a nearly normal temperature, pulse 110 to 120, headache, slight leukocytosis, moderate ataxia in the lower limbs, slight nystagmus, moderately choked discs, slight loss of hearing and no localizing neurologic symptoms.

Since the first spinal puncture, which showed organisms, had been performed at the bedside and examined after several hours, and all others were reported negative, it was decided that this specimen had been contaminated, and the diagnosis

was therefore in doubt. The patient's condition seemed to indicate an inflammatory hydrocephalus, or possibly a brain tumor in a silent area undergoing hemorrhagic degeneration. A diagnostic cephalogram was advised and the patient entered Johns Hopkins Hospital for further study. There the clinical and laboratory findings were verified and ventralography was done for localization.

The final diagnosis was probable subacute meningitis or encephalitis of unknown origin. There was no space-occupying intracranial growth and the patient returned home.

After about two weeks a report was received from the bacteriology department of the Johns Hopkins Hospital that an organism, probably of undulant fever, had finally been grown from the spinal fluid.

Several subsequent examinations of the patient, between that time and the first of July, revealed essentially the same symptoms. On May 7 the spinal fluid was cloudy and showed increased pressure, and the cell count was 271, with only 12 per cent polymorphonuclear lymphocytes. An organism comparable to the Brucella abortus of undulant fever was readily grown after three or four days. His own serum, taken at the same time, agglutinated up to 160 dilution, the same agglutination-titer being shown on a known agglutinable laboratory strain of the Brucella abortus.

For the past two months the patient has been given a polyvalent vaccine made from his own and other laboratory Brucella strains. His symptoms have invariably subsided for several days following spinal puncture. He has slept and eaten well, his vision and hearing have been distinctly defective, his speech thick, his gait moderately atactic, and during his waking hours he has exhibited excessive activity, adding to the clinical ensemble a picture not unlike mild alcoholic intoxication.

Supplemental studies of the organism would seem to indicate that it was of the porcine variety. The patient was last seen on August 24; he has almost completely recovered, and is very nearly free from symptoms.

SUMMARY

I am recording the first case of undulant fever meningitis, in which there were some difficulties in making the diagnosis. I have offered a few suggestions regarding symptomatic treatment and wish to emphasize the importance of culturing the spinal fluid for at least ten days when attempting to isolate the organism.

820 Bankers Trust Building

PROPOSAL TO REGULATE USE OF FIREWORKS

The Legislative Committee of the Iowa State Medical Society, recognizing that large numbers of accidents annually ensue from the indiscriminate use of fireworks, has unofficially endorsed the campaign of the Iowa State Fire Prevention Association, which has as its object the regulation of the sale and use of fireworks, as set forth in the following resolution and ordinance:

Whereas, The storage, sale, transportation and use of fireworks in the State of Iowa has continuously caused a tremendous loss of life and property, and

Whereas, More recently this menace brought destruction and ruin to the very heart of the business district of the City of Spencer, and

Whereas, This loss of life and property have a serious retarding and crippling effect to the progress of the State of Iowa,

Therefore, The Iowa State Fire Prevention Association, Parent-Teachers Association, Federation of Women's Clubs, State Fire Marshal and Iowa Medical Society, through a special appointed committee, deem it proper to advise the people of the State of Iowa that cities and towns have the power under Section 5762 of the Iowa Code to regulate or prohibit the use of fireworks, firecrackers, torpedoes, roman candles, skyrockets, and other pyrotechnic displays.

The committee submits the following suggested ordinance and strongly urges its adoption in every city and town in the State of Iowa.

AN ORDINANCE PROHIBITING THE SALE AND USE OF FIREWORKS OR OTHER PYROTECHNIC DISPLAY

Be It Ordained by the Council of the City (Town) of.....
.....as follows:

Section 1. The discharge, firing or use of firecrackers, rockets, torpedoes, roman candles or other fireworks designed and intended for pyrotechnic display and of pistols, canes, cannons or other appliances using blank cartridges or caps containing chlorate of potash mixtures, is hereby prohibited. Provided that the Mayor or Council may, upon suitable application, issue a permit to a properly qualified person or organization for giving a pyrotechnic display of fireworks in the public parks or other open places. Such display shall be of such a character and so located, discharged or fired as, in the opinion of the Chief of the Fire Department, shall not be hazardous to surrounding property or endanger any person or persons.

Section 2. The sale of fireworks at retail is prohibited. The Mayor or Chief of the Fire Department is given authority to remove or have removed, at the owner's expense, all stocks of fireworks exposed for sale or held in stock in violation of this ordinance.

Section 3. Anyone violating any of the provisions of this ordinance shall, upon conviction, be imprisoned in jail, not to exceed thirty days, or fined, not to exceed One Hundred Dollars ($100.00).

Section 4. All ordinances or parts of ordinances in conflict with the foregoing are hereby repealed.

Section 5. This ordinance shall take effect and be in force from and after its passage and publication.

Doubtless through local organizations in your city or town, it will be found that an ordinance of this kind is the desire of your community.

Plaese notify the Iowa State Fire Prevention Association, 400 Crocker Bldg., Des Moines, Iowa, of the results obtained, or make inquiry if further assistance is needed.

SWEDISH PHYSICIAN WRITING ON "DEATH AND THE DOCTOR"

About two years ago a Swedish physician, Dr. Axel Munthe, received considerable prominence in the literary world as a result of his book, "The Story of San Michele." It is reported that Dr. Munthe, because of ill health and approaching blindness has retired to a suburb of Rome and is there writing a book to be published under the title of "Death and the Doctor." It is exceedingly rare to find an author who, when death is approaching, maintains sufficient interest in literary affairs to record his experiences and emotions.

STATE HEALTH COMMISSIONER'S PAGE

D. C. Sturlaugh, M.D.

The most prevalent diseases as reported for the month of July were whooping cough, smallpox, scarlet fever, chickenpox and measles in the order named. Health conditions in the state were relatively good. Such cases as were reported occurred in widely separated communities and there was nothing in the nature of an outbreak anywhere in the state.

WHOOPING COUGH

One hundred fourteen cases of this disease were reported compared with 168 reported in June.

SMALLPOX

It appears that like "the poor" we shall have smallpox always with us. Stimulation and advice from this department seem to fall upon deaf ears. Sixteen hundred and four cases of this disease have been reported during seven months of the present year. The amount of time lost by reason of quarantine by those ill with smallpox amounted to 61 years. Such loss of time during this period of economic depression is appalling and wasteful, since smallpox is so easily prevented.

SCARLET FEVER

There was a marked reduction in the incidence of this disease; only 66 cases compared with 237 in June. Thirty-four deaths among 2,428 cases occurred during the first six months of 1931, compared with 48 deaths from among 1,915 cases during the same period of 1930. These figures give case fatality rates (deaths per 100 cases) of 1.4 and 2.4 respectively.

MEASLES

Nineteen thirty-one is the "off" year for measles as indicated by the fact that only 842 cases have been reported in seven months compared with 9,774 cases in a like period of 1930. Only two deaths have occurred, compared with 177 for the first six months of the two years. Thirty-eight cases were reported in July compared with 78 last year.

POLIOMYELITIS

This disease is holding off very well. For seven months of the present year there have been fifteen cases reported up to August first. Seven of these occurred in January and were probably cases of delayed infection from the unusual increase experienced in 1930. Only two cases were reported in July, 1931, while there were nine in July, 1930. An abrupt rise in number of cases of poliomyelitis was reported the last few days of August and first few days of September.

These occurred in areas where no cases occurred in the fall of 1930.

TYPHOID FEVER

Twenty-three cases of typhoid fever have occurred in seven months of 1931. In 1930, there had been 30 cases thus far in the year. There were seven deaths (1931) and 13 deaths (1930) during the first six months of each year.

DIPHTHERIA

For the second time in eight years a month has passed without a death from diphtheria being reported. The other month was August of 1928. Only ten cases were reported last month which is the smallest number reported for any month during the last eight years. The months of July and August, 1930, are runners-up with 12 cases each.

With only a little more effort, diphtheria can be eradicated from the state of Iowa.

VENEREAL DISEASES

Although the fact of the prevalence of venereal disease to the numbers of 411 cases of gonorrhea and 199 cases of syphilis is not gratifying, the increased reporting is taken as an indication of the benefits of the new law regarding the method of reporting these cases. Just a word about "Source of Infection" on the report blanks. Many reports come in with the notation "Don't Know" written after the "Source of Infection.' It is impossible to determine whether it is the doctor who "doesn't know" or the patient. If the notation could read "Patient does not know" or "Patient refuses information" it would in a measure clarify the reports and would obviate the necessity of troubling the reporting physician further.

SPECIAL ARTICLE

Editor's Note.—This is the fourth and last of a series of special articles dealing with Coronary Diseases.

TREATMENT

Fred M. Smith, M.D., Iowa City

The arteriosclerotic form of heart disease, except in those who seek medical advice because of hypertension, is seldom recognized until the onset of symptoms which are usually indicative of beginning cardiac failure. The present discussion is therefore concerned primarily with the treatment of cardiac failure.

The treatment in the early stage is rarely difficult. A restriction in the physical activities and the administration of digitalis is ordinarily sufficient to restore the cardiac function. During this stage, it is frequently possible to curtail the progression of the disease through a comprehensive survey of the cardiovascular system and of the various factors which may be contributing to the cardiac disability. Infections should be eliminated when there is justifiable reason to believe that they may be influencing the general health, providing the risk and sacrifice to the patient is not too great. The regulation of the diet in those who are inclined to over-eat and the gradual reduction in the weight of the obese, represent possible means of reducing the work of the heart and perhaps controlling hypertension. The habits of living in general should be studied carefully and regulated as far as possible to fit the disability of the patient. Protection against upper respiratory infection, rest, relaxation and sleep have a decided influence on the course of the disease. In some, it may be necessary to administer a simple sedative to promote the proper relaxation and induce regular sleep. If there is an auricular fibrillation, the continued or intermittent use of digitalis may be indicated to control the cardiac rate. The excessive rate of an auricular fibrillation is often an important factor in promoting the return of the cardiac failure.

An inadequate coronary circulation is usually primarily responsible for the cardiac disability in the form of heart disease. The theophyllin and theobromin preparations may be employed most profitably at this time because of their dilating action on the coronary arteries.[46] The use of these drugs in arteriosclerotic heart disease has been condemned by some because of their failure in certain instances of angina pectoris. Angina pectoris, with few exceptions, however, is ordinarily associated with the most advanced sclerosis of the coronary arteries. Under these circumstances, it is hardly possible to expect any drug to have a uniformly favorable action on the course of the condition. A drug of this character, on the other hand, has greater possibilities in those with less extensive coronary artery disease. This is in accord with clinical experience. The use of these drugs will be further considered in connection with the treatment of the advanced form of cardiac failure.

The treatment of the more advanced forms of cardiac failure is more difficult and often demands a far more rigid regimen.[47] Success, again, depends on a clear conception of the condition and the factors contributing to the cardiac failure. The most satisfactory results are obtained by combining all the available means which will promote the restoration of the cardiac function. Seldom are the conditions the same in any two patients and the measures employed must vary somewhat with the individual possibilities.

Rest, Relaxation and Sleep

The reduction in the cardiac load is one of the fundamental objectives in the treatment. Rest, relaxation and sleep are indispensable to this objective. It is therefore essential that the patient with advanced cardiac failure be confined to bed at as nearly absolute rest as possible. It is important that the bed be comfortable and easily adjusted, so that the head may be elevated to the desired level. By careful nursing the patient should be spared all unnecessary effort in the taking of food and liquids, and the use of the bedpan.

Sleep is by all odds the most important means of resting the heart. It should therefore be induced if necessary by morphin or codein. Morphin, because of its favorable action under these circumstances, is one of the most valuable drugs in the treatment of advanced cardiac failure. It should be given in sufficient amounts to produce a sound sleep. It is seldom necessary to continue the administration for more than two or three nights. In the meantime, a simple sedative, such as luminal, ½ grain, may be prescribed after meals and at bedtime. This promotes relaxation, and after a few days, will enable the patient to sleep throughout the night, and even during the day. It is believed that sleep during the day should be encouraged.

There are frequently other means of reducing

the cardiac load, such as the temporary reduction of the blood pressure in hypertension, venesection and the removal of excess fluid from serous cavities. In those patients with hypertension, the administration of nitroglycerine, 1/100 grain under the tongue every two hours, or even oftener, produces a striking influence on the breathing, and in turn, promotes relaxation and sleep. The effect on the heart is two-fold, the reduction of the load and the dilating action on the coronary arteries.

In the plethoric, cyanotic individuals, particularly those with hypertension, the removal of 500 c.c. of blood from a vein of the arm is often followed by an immediate improvement in the condition. If the peritoneal cavity contains a large quantity of fluid, an abdominal paracentesis can be done following the venesection. The same holds for excessive fluid in the pleural cavity. Here, however, there is a certain risk connected with the procedure which should be taken into consideration. In each of these procedures, the disturbance of the patient should be reduced to the minimum by the use of a sharp needle, novocain, and possibly a preliminary administration of morphin. The benefits derived are often striking and may have a decided influence on the later treatment.

DIET

The diet should be simple and meet the nutritional requirements of the body. During the last four years, the author has employed a diet[48] consisting of 50 grams of protein, 110 grams of fat, and 220 grams of carbohydrates with an energy value of approximately 2,100 calories. It is served in the form of milk, cream, butter, eggs, puréed vegetables and fruit, cooked cereal and fruit juices. The carbohydrates are increased by adding various sugars, as dextrimaltose, glucose and lactose, frequently supplemented by stick candy. Small feedings are given at frequent intervals. In those patients with edema, the fluid intake is restricted to 1,500 to 2,000 c.c. and the salt is reduced to the minimum. The diet is gradually increased by the addition of puréed vegetables and fruit, jellies, toast and crackers. In those greatly undernourished, it is gradually stepped up to approximately 3,000 calories with a proportionate increase in the protein. This diet has the advantage of being easily assimilated and may be regulated to fit the individual nutritional needs and taste. Our results indicate that it has a decided influence on the elimination of the excess fluids and the restoration of the cardiac function in advanced failure.

The patient with cardiac failure should have a daily bowel movement. The diet briefly outlined, because of its fruit and vegetable content, will frequently produce one or more movements during the twenty-four hours. Should the bowels not move daily, a simple laxative or petrolagar is advised. The removal of excess fluid by the bowel is rarely necessary. Furthermore, the violent purging incident to this form of treatment is liable to upset the function of the gastro-intestinal tract, and in addition, imposes unnecessary work on the heart through the frequent use of the bedpan.

DIGITALIS

In the foregoing discussion, the various means of reducing the cardiac load were considered. We now come to the second objective in the treatment of cardiac failure which concerns the use of drugs that increase the efficiency of the heart. Digitalis is, by all means, the most important drug of this group. The benefit derived from this drug is mainly through the direct action on the heart muscle and the depressing effect on the conduction system.[49] In the cardiac failure with a regular rhythm, the effect of the digitalis is largely dependent on the direct action on the heart muscle which increases the length of systole and prolongs the refractory period. When there is an auricular fibrillation, however, the above action is supplemented by the specific depressing effect on the conductivity of the auriculoventricular bundle, which accounts for the greater reduction in the cardiac rate and explains the more favorable therapeutic results.

The administration of 15 to 20 minims of a reliable tincture, or 1½ to 2 grains of the powdered leaf three times a day is ordinarily sufficient to produce the desired results. Occasionally it may be necessary to prescribe larger doses. If, however, results are not obtained with digitalis, in the above amounts, it has rarely been possible for the writer to promote recovery by increasing the dose.[50] In general, too, much reliance is placed on digitalis, and the first objective, namely, the reduction in the cardiac load, is neglected. The results of the writer indicate that the heart is more susceptible to the effects of digitalis if adequate means are taken to reduce the cardiac load.

It is frequently necessary to reduce the above dose after a few days or a week. The continued or periodic use of digitalis in small doses is often advisable in the arteriosclerotic form of heart disease after recovery from the cardiac failure. In patients with auricular fibrillation, it is extremely important that the cardiac rate be controlled. Ordinarily, 10 minims of the tincture, or one grain of the powdered leaf two to three times a day, are sufficient.

Theobromin and Theophyllin Preparations

The use of the theobromin and theophyllin preparations were mentioned in the discussion of the treatment of the earlier manifestations of coronary artery disease. Until recent years these preparations were employed only as diuretics. They have, however, through their dilating action on the coronary arteries, another very important function, and are thus indicated in the treatment of all forms of coronary artery disease. They are most effective in congestive failure with extensive edema.[51] Here the heart profits from the combined action of the drugs. The reduction in the cardiac load resulting from the diuresis adds to the benefit derived from the increased coronary circulation. Experimental studies indicate that euphyllin and theocin, of the theophyllin group, have the greatest effect on the coronary circulation. The former, in particular, is very extensively employed in the treatment of arteriosclerotic heart disease. It is usually prescribed in doses of 1½ to 4½ grains, three times a day. Theocin is more commonly used for its diuretic effect. It too, however, may be administered in doses of 2 to 3 grains for weeks without disturbing the function of the gastro-intestinal tract. Theobromin also has its followers and is occasionally employed in the alkaloid form. More recently theocalcine has been extensively advertised. The dose recommended ranges from 7½ to 10 grains three times a day. It is believed that the administration of these preparations should be continued for weeks or even months, in order to derive the maximum benefit.

Mercurial Diuretics

Novasurol and salyrgen are frequently employed because of their profound diuretic effect. In the experience of the writer, however, they are seldom necessary. They are more or less toxic to the renal parenchyma and the urine must be watched for granular casts and erythrocytes. Albumin alone is not a contra-indication. Salyrgen is the less toxic and has practically replaced the use of novasurol. It is administered either intramuscularly or intravenously in 1 to 1.5 c.c. doses and repeated at intervals of two to three days. A smaller dose is frequently effective. The diuretic effect is more certain and striking when the drug is combined with the administration of ammonium chlorid or ammonium nitrate in doses of 20 to 60 grains three times a day.

The after treatment is a deciding factor in the subsequent course of the cardiac disability. The return of the symptoms may be permitted in a few weeks or, on the other hand, postponed for months or possibly years. The restoration of the heart to the maximum efficiency is the ultimate aim. This entails a prolonged period of rest combined with a gradual rehabilitation of the cardiac muscle, and finally, the removal or control of all possible factors which may be contributing to the cardiac disability, as outlined in the discussion of the treatment of the early manifestation of coronary artery disease.

The exercise should be increased very gradually and never to the point of shortness of breath. If the patient avoids becoming winded, he may be certain that he is not placing an excess load on the heart. It is well that he understands in the beginning that he has a permanent disability within the limits of which he must live to avoid further trouble.

Treatment of Angina Pectoris

The objectives in the treatment of the anginal form of cardiac failure are the same as those previously outlined. Rest is one of the most effective means of restoring the cardiac function and controlling the pain. In the milder form, a curtailment in the exercise alone may produce marked improvement. This is obviously the opportune time to promote the maximum restoration of the cardiac function, and possibly cure the condition. A careful analysis of the various factors which contribute to the production of the pain is essential to this objective. A reduction in the exercise to a point where the pain is not induced, is the first step in the treatment. A period of rest with complete relaxation and perhaps additional sleep is often advisable. It is important that the diet be simple, and over-eating be avoided. If there are digestive disturbances, a more careful supervision of the diet may be necessary. In the obese, a gradual reduction in weight is indicated. If the blood pressure in patients with hypertension is not sufficiently reduced by rest, relaxation, the regulation of diet, and the reduction in the weight of the obese, the administration of the nitrites is justified in order to temporarily reduce the work of the heart. This medication will, in addition, have a favorable influence on the coronary circulation.

There are instances in which such factors as infection, enlarged prostate, diabetes and anemia may contribute to the angina. The various possibilities should be weighed carefully and judicious treatment employed.

The various theophyllin and theobromin preparations have their place in the treatment of angina pectoris. As previously mentioned, however, their possibilities are not as great in this form of heart disease. They should nevertheless be given a chance in combination with the

various other measures, and favorable results have been reported.[52] That it is difficult to evaluate the results of any one remedy in the treatment of angina pectoris is well appreciated, yet the improvement in certain instances observed by the author has been striking. Nitroglycerin, 1/100 grain, frequently gives prompt relief from an attack and should always be available when the patient is caught with pain. Thus drug may be carried conveniently in the pocket and employed often, if necessary, without apparent harm. After the patient is permitted to assume more responsibilities, he should guard against the production of pain.

In the more severe form of angina pectoris, the treatment is much the same as in the advanced stage of congestive failure. Every available means should be employed to reduce the work of the heart and improve the efficiency of the myocardium. A prolonged period of rest, relaxation, and sleep may be necessary. Sedatives are usually indicated, and morphin is often necessary to promote relaxation and sleep and thus obtain the maximum mental and physical rest. The administration of digitalis in doses of 10 to 15 minims of the tincture, or 1 to 1½ grains of the powdered leaf is frequently indicated. Nitroglycerin may be an extremely valuable remedy in this stage of the disease. After the patient is allowed to leave his bed, there is a greater necessity for a more detailed supervision of the exercise and other factors which induce the pain.

Surgical Treatment

Within recent years, the section of various portions of the sympathetic chain has been recommended in the treatment of angina pectoris.[53, 54, 55] In some instances, favorable results have been reported. While the whole subject is frankly in an experimental stage, the results to date and the waning interest would seem to indicate that this form of treatment has a very limited field of usefulness.

Treatment of Coronary Occlusion

The early stage is the critical period of coronary occlusion. The protection of the heart at this time may not only determine the immediate outcome, but often has a deciding influence on the subsequent course. The patient should, therefore, be confined to bed at as nearly absolute rest as possible. Morphin is the most valuable drug in this stage of the treatment and should be administered in sufficient amounts to control the pain and induce sleep. Digitalis is indicated if there are signs of cardiac failure. It is important that the diet be simple and that the patient be spared all unnecessary exertion. The bed rest should be continued for six weeks and possibly two months. In some, it may be advisable to extend this period.

The extent of the infarction is determined by the size of the vessel occluded and the degree of the collateral circulation. It is possible to improve the collateral circulation by the administration of drugs that have a dilating action on the coronary arteries. With this possibility in mind, the writer prescribes euphyllin early in the course of the occlusion, and continues its use until long after the patient is permitted on his feet. The management after the patient is allowed out of bed is deserving of careful supervision. Graded exercises serve an important function in this stage of the treatment. They should be very carefully regulated and not extended to the point of shortness of breath.

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WINNESHIEK SOCIETY ADVOCATES PUBLIC HEALTH NURSE

When the American Legion Auxiliary in Decorah, Winneshiek county, asked the Winneshiek County Medical Society to examine all preschool children and offered to pay therefor, the medical society countered with a constructive proposal, set forth in the following resolution:

"Be it resolved by the Winneshiek County Medical Society in session that we appreciate the interest shown by the Auxiliary of the American Legion of the Anton Bernatz Post, Decorah, Iowa, in sponsoring this worthy cause. It is the consensus of the Society that the service asked for be rendered gratuitously, if, in return we may have the whole-hearted support of the Auxiliaries and Legion Posts of the county in joining and urging our County Board of Supervisors to provide this county with a public health nurse to look after the mental and physical welfare of our babies and children, our future citizens in a developing age, whom we consider of as great a monetary value as are the calves and pigs which are so abundantly provided for by the County Agent.

"We commend the above thought to any other civic or philanthropic organization."

The JOURNAL of the Iowa State Medical Society

ISSUED MONTHLY

Ralph R. Simmons, Editor.....Des Moines

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ACCOMPLISHMENTS OF LEGISLATIVE COMMITTEE

It has been well said that the paramount problem now confronting the medical profession of America is whether medicine is to be practiced and controlled by properly qualified physicians or by untrained usurpers (untrained laymen). For the past thirty years these problems have become increasingly acute in Iowa and the members of this society are confronted with four decisive questions. It should be noted clearly that each of these four problems has a direct bearing on the larger issue "state medicine." They are:

1. Should unqualified persons be permitted to practice medicine in Iowa?
2. Should corporations control the conditions of medical practice?
3. Shall public health activities be guided by laymen or by the medical profession?
4. Is the method of operating the University Hospitals detrimental to private practice?

The Legislative Committee of the Iowa State Medical Society has been instrumental in and has succeeded in securing favorable legislative answers to each of these four vital questions.

Irregular Medical Practice Curbed

A few years ago the statement was made that "due to a weak medical practice act which is almost impossible of enforcement, Iowa is not only the dumping ground for quackery, but it is the one state in the Union where osteopaths and chiropractors are practicing medicine almost without restraint." The activities of the Committee on Public Policy and Legislation, backed by the hearty support of the members of the profession and the various county medical societies, has in the past two or three sessions of the General Assembly of Iowa almost entirely reversed this situation.

In the entire history of law enforcement in the state of Iowa prior to July, 1929, all legal proceedings against violators of the medical practice act were less than a dozen in number and there had been but two or three convictions. In the last two years nearly one hundred individuals have been restrained from the illegal practice of medicine. Three things are responsible for this remarkable change: (1) improvement in the medical and other practice acts in the Forty-fourth General Assembly; (2) the creation of an inspection division in the Department of Health; and (3) the assignment of a member of the Attorney General's office to specialize in handling all cases concerning the practice acts. Your Committee on Public Policy and Legislation sponsored and cooperated in the enactment of certain laws which make it possible to prevent the practice of medicine by untrained persons. Your committee also worked for the measures which have placed in the Department of Health two full time inspectors whose sole duty is to secure evidence of violation of the practice acts. Finally, through the just, efficient and fearless administration of the law and prosecution of violators through the Attorney General's office, there has been brought to justice an average of one case a week for the past two years. A prominent Iowan recently remarked that a thorough understanding of the necessities and standards of medical practice and the intricacies of the code could be achieved only by intensive attention to their legal aspects. The remarkable results accomplished are thus due not only to improvements in the law and the securing of the inspectors, but also to cooperation and specialization in the legal phases of this great program of protecting the people of Iowa from unscrupulous practitioners.

Control by Corporations

When the Committee on Public Policy and Legislation recently tackled the problem of securing for Iowa physicians (as well as the hospitals) fair treatment at the hands of the corporations and other employers, under the Workmen's Compensation Act, the Iowa statutes unreasonably restricted the total amounts which had to be paid for the care of injured workmen. The maximum amount which an employer or the insurance company for him could be required to pay for all hospital, medical and surgical and other professional services, was originally $100. As a result of the very determined and successful effort on the part of the State Society, this limit has now been raised to $300. This has of course resulted in an increase of total income to Iowa physicians. How large is difficult to determine. However,

representatives of insurance companies and Iowa corporations who appeared before the Legislature in 1929 when the limit was raised to $300, testified that if the amendment were passed and the limit increased to $300, the "increased costs would be so great as to put some of the industries and mines out of business." One man who is well qualified to express an opinion upon the subject has stated that "increased income to Iowa physicians since the limit has been raised to $300 is great enough in the aggregate to equal more than the entire cost of operating the State Society year by year."

While the financial aspect of this problem is an important consideration, yet it is in reality the minor one. The vital question here is whether or not the physician, his relation to the patient, and his fees, are to be arbitrarily and often unreasonably controlled by the state and by corporations. Here is very clearly an issue involving questions of "state medicine" and the issue cannot be considered as settled until the physician is fully recognized as a major part in all problems affecting the health and medical treatment of workmen. In all fairness it should be stated that there is now every evidence of a spirit of conciliation and cooperation on the part of most of the more important corporations and insurance companies in this state and it is possible that further adjustments may be secured by cooperation and mutual agreement.

Almost without exception the workmen's compensation laws, of the northern states especially, do not place any arbitrary limit whatsoever upon the maximum medical and hospital fees. In Iowa, as elsewhere, there are adequate safeguards against unreasonable fees, regardless of size. Whether the total bill be for $5.00 or for $500.00, the insurance company or employer has the legal right to appeal to the Industrial Commission, which has set up adequate machinery for adjudicating any differences as to the fairness of medical, surgical and hospital fees. In this way the interests of the employers are fully protected and it is practically impossible for an unreasonable fee to be awarded or paid. This is fair. On the other hand, it is equally fair that there should be no arbitrary maximum limit, but that all reasonable fees for honestly rendered services should be paid in full, regardless of size. A $500.00 professional fee should be paid in full just as surely as a $5.00 professional fee should be paid in full, if the former involves one hundred times the service.

LAY CONTROL OF HEALTH AND MEDICINE

Laymen are not endeavoring to control medical practice in Iowa, thanks to the cooperative spirit of the various lay organizations, the leadership of the State Society in working out administrative problems, and the county health unit law passed in the Forty-third General Assembly. This is a permissive law which allows any county board of supervisors which so desires to unify all local health activities under the county board of health.

The important detail in this plan is that three of the eleven members of the county board of health must be members of the local medical society. This provision insures cooperation between the members of the profession and the county health program and makes certain that the program itself will be based upon sound health and medical principles. This plan has been nationally recognized as sound and effective from the viewpoint of scientific medicine.

PERKINS, HASKELL-KLAUS LAW

In 1927 there was introduced in the Forty-second General Assembly, the so-called Wamstad Bill for the modification of the Perkins, Haskell-Klaus laws. Of the numerous provisions in this bill, the one of greatest general interest was that for charging to the counties which committed patients, all costs in connection therewith, instead of paying these costs out of general state funds. A second provision was for hospitalization elsewhere than at Iowa City. No member of the Legislative Committee of the State Society had any knowledge of this measure until its introduction in the House of Representatives, but since it would have reduced clinical teaching material in the Medical College, the Legislative Committee immediately held conferences with the author and sponsors of the bill. As a result, the provision for hospitalization elsewhere was stricken from the bill, and the plan of charging all costs back to the counties was modified so that approximately fifty per cent would have been paid by the state and fifty per cent by the county making the commitment. In this form the bill passed the House and was defeated in the Senate by one vote.

Soon thereafter the Legislative Committee appeared before the State Board of Education to discuss some of the defects in the administration of the law, with the result that in September, 1928, various officers of the State Society, including the trustees, councilors and the Legislative Committee, met with the president of the University and the dean and department heads of the Medical College for an extended discussion of the common problems involved. Within a few weeks after this meeting the Board of Education adopted certain administrative regulations which had been suggested by the State Medical Society, among which were a limitation of private patients to five per cent of the bed capacity of the hospitals, a two-

year limit upon commitments and the requirement that two physicians should sign the commitment examinations.

Again, in 1929, Mr. Wamstad introduced in the Forty-third General Assembly substantially the same amended bill that had been voted upon in the preceding session. Having been so directed by the House of Delegates, the Legislative Committee supported this bill. However, following a public hearing on the measure, Mr. Wamstad withdrew the bill, making at that time the following statement, which was printed in the House Journal for March 22:

> Mr. Speaker: I am about to ask that House File No. 203 be withdrawn from further consideration by the House. In fairness to the friends of this bill, I am going to request that I be permitted to print in the Journal my reasons therefor.
>
> Since introducing this bill in the Forty-second and again at the beginning of this session, I have become convinced that there has been a concerted effort made on the part of the University authorities, the Board of Education and the State Medical Society to correct the abuses which have existed in the administration of the Perkins, Haskell-Klaus laws in recent years.
>
> Chief among these are the limitation of the period of commitment and a more complete statement showing financial conditions and necessity of hospitalization of patients committed.

The following spring the Legislative Committee proposed to the House of Delegates that a special committee be appointed to investigate the operation of the Perkins, Haskell-Klaus laws in Iowa as affecting the profession, the indigent, the various counties and medical education. After eighteen months of study, this committee made a report before a special meeting of the House of Delegates in December, 1930. A supplementary report with definite suggestions for future procedure was presented by the committee before the 1931 annual meeting of the House of Delegates, which adopted a suggestion with the result that the society is now engaged in a formal effort to secure all possible ideas with regard to modification and improvement of the Perkins, Haskell-Klaus laws, not only from members of the State Medical Society, but from all governmental units or officers concerned with the operation of these laws.

The above mentioned program adopted by the House of Delegates provides that these proposals be published in the November issue of the Journal of the Iowa State Medical Society, and considered at a special session of the House of Delegates. These deliberations shall be published in the Journal prior to the 1932 annual session, at which time the matter is to come up for definite and final action, so that the State Society may at that time delegate the Legislative Committee a specific task in connection with proposed amendments and improvements of the Perkins, Haskell-Klaus laws.

Worth While Results

The physicians of Iowa more than ever before are receiving fairer treatment and better recognition and cooperation in their efforts to protect the health and medical interests of the citizens of this commonwealth. Unity, cooperation and an unselfish interest in public welfare have produced these results. Continued unity and support can accomplish still more and every member of the Iowa State Medical Society should keep himself fully informed of the legislative and political program.

GASTRIC AND DUODENAL ULCER INCREASING

While the mortality rates from most of the infectious diseases, including tuberculosis, have shown a steady but definite decrease during the past ten years, many of the diseases of a non-infectious nature have shown a gradual but equally definite increase. Outstanding in this latter group are cardiac disease, diabetes and cancer. According to a statistical survey completed recently by the Metropolitan Life Insurance Company* it would appear that gastric and duodenal ulcer may be added to this latter list. In their survey among male policyholders in their Industrial Group the death rate from these conditions reached its peak in 1930 and has shown a gradual, definite rise since 1921. For the three-year period from 1927 to 1930, the death rate was increased over the three-year period of 1921 to 1923 by 38.5 per cent from peptic ulcer in white males and 22.7 per cent in colored males. The age incidence of greatest increase occurred in the white group between 55 and 64, with 76.5 per cent gain. In the group age 45 to 54 the second greatest gain was noted with 51.3 per cent. It is of interest to note that while the death rate among males has shown this sharp increase from these conditions, the rate among females has decreased. The rate for the recent period was observed as 8.3 per cent less for white females and 6.8 per cent less among colored females.

No adequate explanation for the increases observed can be offered, in spite of the fact that during the past few years medical research, dealing with various phases of the problems of peptic ulcer,

* Statistical Bulletin, Metropolitan Insurance Company, XII; 6; (June) 1931: p. 3.

seems to have been productively pursued in many institutions. Much information has been accumulated relative to the comparative merits of medical and surgical treatment and the end results of such treatment, as well as the various diagnostic methods and quite recently the etiology of the disease, but no adequate explanation for its increased incidence has been presented to our knowledge from any source.

RATIO OF PHYSICIANS IN IOWA AVERAGE FOR NATION

A recent press notice indicates that during the school year of 1930-31 the medical school at Iowa City furnished instruction in medicine to 403 students. This number would seem large to meet the needs of the state and a protest has been registered in at least one local newspaper that Iowa now had an overabundance of medical practitioners. A recent report from an unbiased national committee* indicates that the physicians in the United States today number approximately 150,000 or 126 physicians for each 100,000 population. Their report further indicates that in Iowa as well as the Dakotas, Minnesota, Missouri, Nebraska and Kansas, the ratio is practically that for the entire nation. (In Iowa, 131 physicians for every 100,000 population.) Appeals are constantly being made to the officers of the State Medical Society for physicians to serve in localities over the state now without medical aid. Until the number of physicians in Iowa increase to a point well in excess of the average or statistical proof advanced that the citizens of our great state enjoy greater immunity from disease than those in other sections, it would seem that Iowa's one medical school should be commended for its service to the welfare of the state and given every encouragement in the fine work which they are accomplishing.

THE DEATH RATE IN IOWA INCREASES

While the death rate in Iowa has shown a definite increase during the past three years the present rate of 10.6 is below the general death rate for the entire country which is stated as 12.0. The two outstanding factors in this increased rate are deaths from accidents and those resulting from childbirth. During the past year the maternal death rate has increased 4.8 points. Deaths from cancer continue to show an increase and the economic depression has reflected itself in a sharp increase in deaths from suicide. Poliomyelitis was more prevalent during the past year throughout the midwest—222 cases having been reported in Iowa in 1930—and the death rate recorded as 14.9 in this state. Measles, ordinarily considered as one of the simpler diseases of childhood, showed a death rate for the past year of 7.0 which, excepting the year of 1927 with a rate of 9.3, is the highest experienced since 1925.

Substantial reductions are noted in the death rates from typhoid fever, diphtheria, influenza and tuberculosis. The rates for typhoid, diphtheria and tuberculosis are the lowest ever recorded in the state.

* The Committee on Costs of Medical Care, Dr. Ray Lyman Wilbur, Secretary of the Interior, Chairman.

DR. FRANK L. WILLIAMS AWARDED NEW CITATION

Dr. Frank L. Williams of Des Moines, Director of the United States Veterans Bureau who has already been awarded the Distinguished Service Cross, was on August 26, 1931, awarded the Oak Leaf Cluster in an official citation, which read in part as follows:

"For extraordinary heroism in action near Chateau Thierry, July 26 to 28, 1918. Lieutenant Williams went forward with his battalion and cared for the wounded under difficult circumstances. He was without shelter, food and sleep for practically three days.

"The area over which he worked was constantly swept with artillery machine gun fire and was drenched with poisonous gas. He was always close behind his battalion with his aid post, the selection of its location being at all times for the benefit of the wounded and not as a matter of personal safety.

"Much of the work was at night where enemy observation and absence of suitable cover made it impossible to use lights of any kind. Taxing himself to his fullest powers, strength, endurance and skill, he dressed the wounded in darkness by sense of touch alone.

"Although given permission and advice to withdraw farther to the rear and to less exposed positions, he expressed the desire to remain in forward line in order to give his services as soon as possible to the wounded men."

Dr. Williams has been director of the Veterans' Bureau in Des Moines since January 1, 1925. Previous to that he was connected with the Iowa public health service.

THE NEWLY ELECTED OFFICERS OF THE MEDICAL WOMEN'S NATIONAL ASSOCIATION

The following officers were elected at the annual meeting of the Medical Women's National Association, held in Philadelphia on June 8th: Dr. Esther Pohl Lovejoy of New York City, president; Dr. Alice N. Pickett of Louisville, first vice president; Dr. Elsie Seelye of Denver, second vice president; Dr. Margaret Castex Sturgis of Philadelphia, third vice president; Dr. Sylvia Allen of Rock Hill, S. C., secretary; Dr. Mary Riggs Noble of Harrisburg, treasurer. At this meeting the members demanded a more equitable representation in the activities of the American Medical Association, and in deploring the discrimination against women doctors pointed out that only 174 of the 627 hospitals approved by the American Medical Association accepted women as internes.

PROGRAM

International Assembly of the Inter-State Post-graduate Medical Association of North America

MILWAUKEE, WISCONSIN
October 19th, 20th, 21st, 22nd, 23rd, 1931

Monday, October 19th
8:00 A. M.

Diagnostic Clinic (Medical).
Dr. Elsworth S. Smith, Emeritus Professor of Clinical Medicine, Washington University School of Medicine, St. Louis, Mo.
Diagnostic Clinic (Obstetrical).
Dr. Irvin Abell, Clinical Professor of Surgery, University of Louisville School of Medicine, Louisville, Ky.
Diagnostic Clinic (Medical).
Dr. Harlow Brooks, Professor of Clinical Medicine, University and Bellevue Hospital Medical College, New York, N. Y.
Diagnostic Clinic (Surgical).
Dr. Frank H. Lahey, Director, Lahey Clinic, Boston, Mass.
Diagnostic Clinic (Pediatric).
Dr. Alan G. Brown, Professor of Pediatrics, University of Toronto Faculty of Medicine, Toronto, Canada.
Diagnostic Clinic (Medical).
Dr. Henry A. Christian, Hersey Professor of the Theory and Practice of Physic, Harvard University Medical School, Boston, Mass.
Address: "Chronic Arthritis as an Economic Human Problem."
Dr. Robert B. Osgood, John B. & Buckminster Brown, Emeritus Professor of Orthopedic Surgery, Harvard University Medical School, Boston, Mass.

1:00 P. M.

The Thyroid Gland

Address: "The Use of Iodin in Grave's Disease."
Dr. Clarence G. Toland, Associate Professor of Clinical Surgery, College of Medical Evangelists, Loma Linda, Los Angeles, Calif.
Address: "The Use of Iodin in Recurrent Exophthalmic Goiter."
Dr. S. F. Haines, Instructor in Medicine, University of Minnesota, Graduate School of Medicine, Mayo Clinic, Rochester, Minn.
Address: "The Safeguards in the Technic of Operations on the Thyroid Gland."
Dr. Robert S. Dinsmore, Cleveland Clinic, Cleveland, Ohio.
Address: "Thyroiditis."
Dr. Frank H. Lahey, Boston, Mass.
Address: "Cardiac Irregularities Associated with Diseases of the Thyroid Gland.
Dr. Elsworth S. Smith, St. Louis, Mo.

Obseterics and Gynecology

Address: "Retroversion of the Uterus, and Complete Prolapse of the Uterus."
Dr. Irvin Abell, Louisville, Ky.
Address: "Conservative Treatment of Eclampsia."
Dr. Otto H. Schwartz, Professor of Obstetrics and Gynecology, Washington University School of Medicine, St. Louis, Mo.
Motion Picture: "Suspension of the Uterus for Retro-Displacement."
Dr. H. O. Jones, Associate Professor of Obstetrics and Gynecology, Northwestern University Medical School, Chicago, Ill.

The Circulatory System

Address: "Mechanism and Transmission of Heart Murmurs with a Special Consideration of 'The Unimportant Murmur.'"
Dr. S. Marx White, Professor of Medicine, University of Minnesota Medical School, and University of Minnesota, Graduate School of Medicine, Minneapolis, Minn.
Address: "Syphilitic Aortitis."
Dr. William S. Middleton, Associate Professor of Medicine, University of Wisconsin Medical School, Madison, Wisconsin.

7:00 P. M.

Address: "Syndrome of Ayerza."
Dr. William Sharp McCann, Professor of Medicine, University of Rochester School of Medicine, Rochester, N. Y.
Address: "Circulatory Failure in Acute Infectious Diseases."
Dr. Charles A. Elliott, Professor of Medicine, Northwestern University Medical School, Chicago, Ill.
Address: "Heart Diseases in Children and Their Sequelae."
Dr. Alan G Brown, Toronto, Canada.
Address: "Prognosis of Hypertension."
Dr. Louis Hamman, Associate Professor of Clinical Medicine, Johns Hopkins University School of Medicine, Baltimore, Md.
Address: "Coronary Thrombosis."
Dr. Harlow Brooks, New York, N. Y.
Address: "The Diagnosis and Treatment of Adhesive Pericarditis."
Dr. C. Sidney Burwell, Professor of Medicine, Vanderbilt University School of Medicine, Nashville, Tenn.
Address: "Aortic Lesions in Relation to Cardiac Physical Signs and Cardiac Function."
Dr. Henry A. Christian, Boston, Mass.

Tuesday, October 20th
8:00 A. M.

Diagnostic Clinic (Surgical).
Dr. John F. Erdman, Professor of Surgery, Columbia University College of Physicians and Surgeons, and Director of Surgery, Post Graduate Hospital of Columbia University, New York, N. Y.
Diagnostic Clinic: "Toxemias of Pregnancy" and "Antenatal Hemorrhage."
Dr. P. Brooke Bland, Professor of Obstetrics, Jefferson Medical College of Philadelphia, Philadelphia, Pa.
Diagnostic Clinic (Surgical).
Dr. John M. T. Finney, Professor of Clinical Surgery, Johns Hopkins University School of Medicine, Baltimore, Md.
Diagnostic Clinic (Medical).
Dr. Campbell P. Howard, Professor of Medicine, McGill University Faculty of Medicine, and Physician to the Montreal General Hospital, Montreal, Canada.
Diagnostic Clinic (Surgical).
Dr. F. N. G. Starr, Professor of Clinical Surgery, University of Toronto Faculty of Medicine, Toronto, Canada.
Diagnostic Clinic (Oto-Laryngological).
Dr. Samuel J. Crowe, Clinical Professor of Laryngology and Otology, Johns Hopkins University School of Medicine, Baltimore, Md.
Address: "Allergic Diseases."
Dr. Warren T. Vaughan, Professional Bldg., Richmond, Va.

1:00 P. M.

The Gastro-Intestinal Tract

Address: "Peptic Ulcer—A Review of Present Knowledge of Etiology, and Best Methods of Treatment."
Dr. John M. T. Finney, Baltimore, Md.
Address: "Surgical Aspects of Carcinoma of the Rectum."
Dr. John F. Erdmann, New York, N. Y.
Address: "Cancer of the Stomach."
Dr. F. N. G. Starr, Toronto, Canada.
Address: "The Present Status of the Treatment of Hirschsprung's Disease."
Dr. Fred W. Rankin, Associate Professor of Surgery, University of Minnesota, Graduate School of Medicine, Mayo Clinic, Rochester, Minn.
Address: "Does Peptic Ulcer Cause Permanent Disability?"
Dr. William Gerry Morgan, Professor of Gastro-Enterology, Georgetown University School of Medicine, Washington. D. C.

Oto-Laryngology

Address: "Plastic Surgery of the Nose, Lips and Cheeks."
Dr. Gordon B. New, Professor of Laryngology, University of Minnesota, Graduate School of Medicine, Mayo Clinic, Rochester, Minn.
Address: "Laryngitis."
Dr. Fielding O. Lewis, Professor of Laryngology, Jefferson Medical College of Philadelphia, Philadelphia, Pa.
Address: "Diseases of the Ear that give rise to Deafness."
Dr. Samuel J. Crowe, Baltimore, Md.
Address: "Diagnosis and Treatment of Carcinoma of the Larynx."
Dr. William V. Mullin, Head of the Department of Oto-Laryngology Cleveland Clinic, Cleveland, Ohio.
Address: "Congenital Syphilis."
Dr. Isaac A. Abt, Professor of Pediatrics, Northwestern University Medical School, Chicago, Illinois.

7:00 P. M.

Malignant Diseases

Address: "Malignant Diseases in Childhood."
Dr. H. F. Helmholz, Professor of Pediatrics, University of Minnesota, Graduate School of Medicine, Mayo Clinic, Rochester, Minn.
Address: "Incidence, Diagnosis and Treatment of the Primary Malignant Tumors of Long Bones."
Dr. Dean D. Lewis, Professor of Surgery, Johns Hopkins University School of Medicine, Baltimore, Md.
Address: "Radiation Therapy in Intra-Oral Cancer with its Complications."
Dr. James M. Martin, Professor of Radiology, Baylor University College of Medicine, Dallas, Texas.
Address: "Infantile Paralysis."
Dr. William McKim Marriott, Dean and Professor of Pediatrics Washington University School of Medicine, and Physician in Chief, St. Louis Children's Hospital, St. Louis, Mo.
Address: "Etiology and Treatment of Low Back Pain from the Mechanistic (Orthopedic) Point of View."
Dr. Arthur Steindler, Professor of Orthopedic Surgery, State University of Iowa College of Medicine, Iowa City, Iowa.
Address: "Recent Advances in the Treatment of Nephritis."
Dr. James S. McLester, Professor of Medicine, University of Alabama School of Medicine, Birmingham, Alabama.

Wednesday, October 21st

8:00 A. M.

Diagnostic Clinic (Surgical).
Dr. Dean D. Lewis, Professor of Surgery, Baltimore, Md.
Diagnostic Clinic (Medical)
Dr. Leonard G. Rowntree, Professor of Medicine, University of Minnesota, Graduate School of Medicine, Mayo Clinic, Rochester, Minn.
Diagnostic Clinic (Urological).
Dr. Herman L. Kretschmer, Clinical Professor of Surgery (G. U.) Rush Medical College, Chicago, Ill.
Diagnostic Clinic (Surgical).
Dr. Charles H. Frazier, John Rhea Barton Professor of Surgery, University of Pennsylvania School of Medicine, Philadelphia, Pa.
Diagnostic Clinic (Surgical).
Dr. William E. Lower, Director, Cleveland Clinic Foundation, Former Associate Professor of Genito-Urinary Surgery, Western Reserve University School of Medicine, Cleveland, Ohio.
Address: "Choice of Anesthetic Methods in Different Types of Patients and Conditions."
Dr. John S. Lundy, Associate Professor of Anesthesia, University of Minnesota, Graduate School of Medicine, Mayo Clinic, Rochester, Minn.
Address: "The Influence of Pain and Mortality in Modern Medical Practice."
Dr. Charles H. Mayo, Associate Chief of Staff, Mayo Clinic; Professor of Surgery, University of Minnesota Medical School, and University of Minnesota, Graduate School of Medicine, Rochester, Minn.

1:00 P. M.

Diagnostic Clinic (Surgical).
Dr. Fred W. Rankin, Associate Professor of Surgery, University of Minnesota, Graduate School of Medicine, Mayo Clinic, Rochester, Minn.

Urology

Address: "Conservative Plastic Procedure in Prostatic Hypertrophy."
Dr. Joseph F. McCarthy, Professor of Urology, New York Post Graduate Medical School, New York, N. Y.
Address: "Further Research Studies of the Factors which are Conducive to the Production of Prostatic Hypertrophy."
Dr. William E. Lower, Cleveland, Ohio.
Address: "Treatment of Carcinoma of the Bladder."
Dr. Herman L. Kretschmer, Chicago, Ill.
Address: "The Value and Limitations of Intravenous Pyelography in the Diagnosis of Renal and Ureteral Diseases."
Dr. Bernard H. Nichols, Head of the Department of Radiology, Cleveland Clinic, Cleveland, Ohio.
Address: "Diagnosis and Treatment of Tumors of the Testicle."
Dr. Charles C. Higgins, Cleveland Clinic, Cleveland, Ohio.

The Central Nervous System

Address: "Experience Gained in One Hundred Operations under Local Anesthetic for the Permanent Cure of Trigeminal Neuralgia Major."
Dr. William T. Coughlin, Professor of Surgery, St. Louis University School of Medicine, St. Louis, Mo.
Address: "Encephalography and Ventriculography—Methods and Interpretation."
Dr. Charles H. Frazier, Philadelphia, Pa.

7:00 P. M.

Address: "Symptomatology, Prognosis and Treatment of Minor Neuroses and Psychoses."
Dr. Louis J. Karnosh, Assistant Clinical Professor of Nervous Diseases, Western Reserve University School of Medicine, Cleveland, Ohio.
Address: "Pulsating Exophthalmos with Special Reference to Surgical Treatment."
The Joseph Schneider Foundation Presentation.
Dr. John M. Wheeler, Professor of Ophthalmology, Columbia University College of Physicians and Surgeons, New York, N. Y.
Address: "Suggestions from Medical Psychology in the Field of General Medicine."
Dr. William A. White, Professor of Mental and Nervous Diseases Georgetown University School of Medicine, Washington, D. C.
Address: "Water in Relation to Health and Disease."
Dr. Leonard G. Rowntree, Rochester, Minn.
Address: "Water and Chemical Balance in Surgery."
Dr. Thomas G. Orr, Professor of Surgery, University of Kansas School of Medicine. Kansas City, Kansas.

Thursday, October 22nd

8:00 A. M.

Diagnostic Clinic (Surgical).
Dr. Waltman Walters, Associate Professor of Surgery, University of Minnesota, Graduate School of Medicine, Mayo Clinic, Rochester, Minn.
Diagnostic Clinic (Medical).
Dr. Russell L. Cecil, Assistant Professor of Clinical Medicine, Cornell University Medical College, New York, N. Y.
Diagnostic Clinic (Pediatric).
Dr. William McKim Marriott, St. Louis, Mo.
Diagnostic Clinic (Surgical).
Dr. Arthur Dean Bevan, Professor of Surgery and Head of the Surgical Department, Rush Medical College, Chicago, Illinois.
Diagnostic Clinic (Medical).
Dr. Russell L. Haden, Chief of the Medical Staff, Cleveland Clinic, Cleveland, Ohio.
Diagnostic Clinic: "Differentation of Benign and Malignant Tumors of the Breast."
Dr. Burton J. Lee, Professor of Clinical Surgery, Cornell University Medical College, and Clinical Director of Memorial Hospital, New York, N. Y.

1:00 P. M.

The Respiratory System

Address: "Roentgenological Diagnosis of Early Tuberculosis."
Dr. B. R. Kirklin, Mayo Clinic, Rochester, Minn.
Address: "Injuries of the Lungs and Pleura."
Dr. Frank K. Boland, Professor of Clinical Surgery, Emory University School of Medicine, Atlanta, Ga.
Address: "Diagnosis and Treatment of Mediastinal Tumors."
Dr. Stuart W. Harrington, Associate Professor of Surgery, University of Minnesota, Graduate School of Medicine, Mayo Clinic, Rochester, Minn.
Address: "Bronchial Obstruction, Partial or Complete, as Shown by the Roentgen Ray Examination."
Dr. Willis F. Manges, Professor of Roentgenology, Jefferson Medical College of Philadelphia, Philadelphia, Pa.
Address: "Abscess of the Lung."
Dr. Carl A. Hedblom, Professor of Surgery, University of Illinois College of Medicine, Chicago, Illinois.
Address: "Recent Advances in Diagnosis and Treatment of Pneumonia."
Dr. Russell L. Cecil, New York, N. Y.
Address: "Surgical Treatment of Pulmonary Tuberculosis."
Dr. Alton Ochsner, Professor of Surgery, Tulane University of Louisiana, School of Medicine, New Orleans, La.

Fractures

Address: "The Treatment of Fractures."
Dr. Melvin S. Henderson, Professor of Orthopedic Surgery, University of Minnesota, Graduate School of Medicine, Mayo Clinic, Rochester, Minn.
Address: "Operative Arrestment of Longitudinal Growth of Bones; Indications for and Results of."
Dr. Dallas B. Phemister, Professor of Surgery, University of Chicago Medical School, Chicago, Illinois.
Address: "The Treatment of Ununited Fractures."
Dr. Edwin W. Ryerson, Professor of Orthopedic Surgery, Northwestern University Medical School, Chicago, Illinois.
Address: "Purpura and Pathological Hemorrhage."
Dr. Russell L. Haden, Cleveland, Ohio.

7:00 P. M. The Breast

Addresses:
Dr. Arthur Dean Bevan, Chicago, Illinois.
Dr. Edmond M. Eberts, Montreal, Canada.
Dr. Paul A. O'Leary, Rochester, Minn.
Dr. James H. Means, Boston, Mass.
Dr. Hilding Berglund, Minneapolis, Minn., and **Dr. Robert D. Rudolph**, Toronto, Canada.

Friday, October 23rd

8:00 A. M.

Diagnostic Clinic (Surgical).
Dr. E. Starr Judd, Professor of Surgery, University of Minnesota, Graduate School of Medicine, Mayo Clinic, Rochester, Minn.
Diagnostic Clinic (Medical).
Dr. John H. Musser, Professor of Medicine, Tulane University of Louisiana School of Medicine, New Orleans, La.
Diagnostic Clinic (Surgical).
Dr. John B. Deaver, Emeritus Professor of Surgery, University of Pennsylvania School of Medicine and Surgeon-Chief to the Lankenau Hospital, Philadelphia, Pa.
Diagnostic Clinic (Medical).
Dr. Cyrus C. Sturgis, Professor of Internal Medicine, University of Michigan Medical School, Ann Arbor, Michigan.
Diagnostic Clinic (Surgical).
Dr. George W. Crile, Director, Cleveland Clinic Foundation; Professor Emeritus of Surgery, Western Reserve University School of Medicine, Cleveland, Ohio.
Diagnostic Clinic (Medical).
Dr. Elliott P. Joslin, Clinical Professor of Medicine, Harvard University Medical School, Boston, Mass.
Address: "The Importance of Preserving or Restoring Function in performing Radical Operations on the Large Intestine and Rectum."
Dr. William J. Mayo, Chief of Staff, Mayo Clinic, Rochester, Minn., and **Dr. C. F. Dixon**, Instructor in Surgery, Mayo Clinic, Rochester, Minn.

1:00 P. M.

The Gall-Bladder and Liver

Addresses:
Dr. James E. Paullin, Atlanta, Ga.
Dr. E. Starr Judd, Rochester, Minn.
Dr. William D. Haggard, Nashville, Tenn.
Dr. John H. Musser, New Orleans, La.
Dr. Waltman Walters, Rochester, Minn.
Dr. M. A. Glankenhorn, Cleveland, Ohio.
Dr. John B. Deaver, Philadelphia, Pa.
Dr. Cyrus C. Sturgis, Ann Arbor, Michigan.
Dr. George W. Crile, Cleveland, Ohio; **Dr. E. P. McCullagh**, Cleveland Clinic, Cleveland, Ohio, and **Dr. Elliott P. Joslm**, Boston, Mass.

SOCIETY PROCEEDINGS

Adams County

The Adams County Medical Society held its annual heart and lung clinic in Corning, Friday, August 7. Following a twelve-thirty luncheon at the Bacon Hotel, John H. Peck, M.D., and Daniel J. Glomset, M.D., both of Des Moines, spoke on "Early Signs of Tuberculosis," and "The Nervous Heart," respectively. The clinic was held during the afternoon at the court house, when patients recommended by the local physicians were examined.

Appanoose County

A combined heart and lung clinic and medical session was held at Centerville, Friday, July 17, when members of the Appanoose County Medical Society met with John H. Peck, M.D., of Des Moines, and C. B. Luginbuhl, M.D., also of Des Moines. Between twenty-five and thirty patients were examined by the visiting clinicians in the afternoon. Following a six-thirty dinner at the Tumble Inn for the medical society, Dr. Luginbuhl presented a paper on "Present Day Treatment of Hyperthroidism," and Dr. Peck spoke on "Diagnosis of Childhood Tuberculosis."

Calhoun County

Members of the Calhoun County Medical Society met at the court house in Rockwell City, Thursday, August 27 for the sixth of a series of programs arranged for that organization by the Speakers Bureau of the Iowa State Medical Society. President L. L. Davidson introduced Robert L. Parker, M.D., of Des Moines, secretary of the state society, who gave a very comprehensive paper on "Drug Therapy." He stressed the importance of knowing the action of a proved drug, when and how to exhibit same, and when not to. The paper was well received and discussed. Arthur W. Erskine, M.D., of Cedar Rapids, was then introduced and gave an impromptu presentation of the subject of X-Ray Therapy. The informal manner of the speaker contributed not a little to the interest of the hearers. Discussion was rather free, being stimulated by the interest of President Davidson in the subject and by the presence of Dr. W. W. Bowen of Fort Dodge, who gave a very helpful resumé of the subject, stating that he considered the essayist, "the master radiologist of Iowa."

P. W. Van Metre, M.D., Secy.

Dallas-Guthrie Society

The regular monthly meeting of the Dallas-Guthrie County Medical Society was held Wednesday, August 12, at the Country Club in Perry. After a chicken dinner served at noon, the following program was presented: Medical Legislation, Senator L. H. Doran of Boone; Ewing's Sarcoma, Verl A. Ruth, M.D., of Des Moines; Our Society, Channing G. Smith, M.D., of Granger, president of the State Society.

Davis County

About twenty-five physicians and their families were guests of the Davis County Medical Society, Thursday, July 23, when the annual picnic of that organization was held at the Bloomfield Country Club. Speakers on the afternoon program were: C. A. Boice, M.D., of Washington, Bone Tissue; Robert L. Parker, M.D., of Des Moines, State Society Problems and Finances, and H. A. Spilman, M.D., of Ottumwa, Tuberculosis.

Scott County

Tuesday, September 1, the regular meeting of the Scott County Medical Society was held at the Chamber of Commerce in Davenport. Julian D. Boyd, M.D., of Iowa City, from the department of pediatrics was the speaker of the evening, and a lantern slide demonstration on Preparation of Milk, was shown by courtesy of the Brookhill Farms Laboratory.

AUXILIARY NEWS

Twin Lakes Auxiliary

The fourth annual session of the Woman's Auxiliary to the Twin Lakes District Medical Society was held at Twin Lakes, June 18, in conjunction with the meeting of the Twin Lakes District Medical Society. The district is composed of the following counties: Calhoun, Carroll, Greene, Hamilton, Humboldt, Ida, Kossuth, Pocahontas, Sac, Webster and Wright.

The meeting was called to order at 10:30 A. M., by the president, Mrs. D. H. Hopkins of Glidden. A business meeting was held and the following officers were elected: Mrs. Richard C. Sebern of Fort Dodge, president; Mrs. Paul Van Metre of Rockwell City, vice president; Mrs. O. H. Prettyman of Manson, secretary and Mrs. C. E. Wolfe of Coon Rapids, treasurer.

At noon the ladies joined the doctors for the annual picnic dinner. About three hundred and fifty were present to enjoy the spread and the usual good visit with old friends and acquaintances. After the program, the women adjourned to the State Institution at Lanedale, where they were taken on a tour of inspection by the superintendent, Miss Pauline Johnson. An interesting program which had been especially prepared for the visitors was given after which tea was served.

Mrs. O. H. Prettyman, Secy.

On July 26, after the laying of the cornerstone ceremonies for the new hospital at Leon, an effort was made to organize the wives of the doctors of that county into a woman's auxiliary, such an excellent opportunity for immediate service being opened to them.

A further effort was put forth to interest the

physician's wives of Osceola to organize a woman's auxiliary in their county or combination of surrounding counties. It is to be hoped that both auxiliaries may materialize.

INTERESTING NEWS
In Brief

Dr. Lester Tilton, formerly of Clinton, Iowa, whose cancer clinic in Chicago was closed last May, has again attracted considerable attention in the newspapers. The state of Illinois is proceeding against Dr. Tilton on a charge of practicing medicine without a license and six Chicago physicians who were associated with him in the cancer clinic may lose their licenses as the result of hearings before the medical committee of the State Department of Registration and Education. As the result of investigations by the federal food and drug administration, a deputy marshal seized 1,800 bottles of Tilton's medicine, alleged to have been shipped from Clinton to Chicago. At the same time various damage suits had been filed against Dr. Tilton by a former patient, which according to a Chicago newspaper storp of August 6, totalled $350,000.

Ross Dyar, self-styled "health evangelist," appeared in Centerville, Iowa, a few weeks ago and upon complaint of citizens of that community, was investigated by the department of health and the attorney general's office. Almost immediately Dyar left Centerville and a few weeks later came to the attention of state authorities in Boone, it appearing that he had in the meantime operated in Marshalltown. The Boone county attorney applied for a temporary injunction and at the same time Dyar was bound over to the Boone county grand jury on the charge of practicing medicine without a license. He was freed on a thousand dollar bond and left Boone soon thereafter.

The interest of county medical societies and county supervisors in the problem of proper professional services for county indigents and reasonable payment therefor is receiving increasing attention throughout the state, as evidenced by the fact that within the last few weeks both Page and Van Buren counties have had the matter under serious discussion. On July 21 the supervisors of Van Buren county voted to complete a contract with the Van Buren County Medical Society for the care of the poor outside of the county home. In Page county the physicians have protested the unreasonable reduction of fees by the supervisors and have appeared before the board with their attorneys.

Dr. J. W. Wallace, New York City, formerly of Des Moines, field director of the national chamber of commerce health conservation contests, has visited various Iowa cities during the past month. The object of the contests is to interest the business men of the community in the work of the various health agencies and also to make a careful appraisal of the public health services in each community: water supply, sewage disposal, milk supply, disease preventive measures, health education in the schools, public health nursing, popular education in health, lectures, public health laboratories and public health clinics.

Medical fakers and swindlers are adopting a variety of methods in Iowa. One of the latest and most audacious swindles is reported from Sac City by the Sac Sun. Stopping in front of the home of a woman afflicted with a serious eye condition, a stranger made himself acquainted and explained that Dr. William Mayo of Rochester happened to be going through and was out in the automobile. After the proper preliminaries, "Dr. Mayo" was persuaded to take the case, put a few drops in the patient's eyes, and the two departed with a certified check for $800.

Recent publicity given the new law which requires physicians to report to sheriffs any cases coming to their attention which are obviously connected with crime, has aroused considerable discussion, as indicated by various newspaper editorials and stories. While most editors seem to think the law is a good thing and should result in a decrease of crime and the majority of physicians seem to agree with them, yet there are one or two objections that "after all, a doctor is a doctor and not a crime detector."

News stories from Washington county indicate that the citizens of that community and especially those interested in the county hospital have set about solving the training school requirement of twenty-five a day average by arousing the citizens to a full recognition of the usefulness of the hospital and a spirit of community pride which it is hoped will result in increased patient days.

An open hospital in Estherville is to result from an arrangement recently completed between Dr. Coleman, owner of the Coleman Hospital, and the Emmet County Medical Society. Under the new plan the hospital will be opened to all members of the medical society in Emmet and the surrounding counties.

Harrison county physicians and officials recently invited Dr. E. R. Coffey, director of rural health service of the State Department of Health, to appear before them in a discussion of a possible county health unit in that county.

PERSONAL MENTION

Dr. Roy G. Barrick, formerly assistant professor of psychiatry in the College of Medicine, State University of Iowa, has recently accepted a position on the staff of the Institute for Juvenile Research at Chicago, and has the following assignments: psychiatrist in charge of mental health work at Illinois State Penitentiary, assistant professor of criminology, University of Illinois College of Medicine, and psychiatrist in charge of Joliet Child Guidance Clinic.

Dr. William A. Rohlf of Waverly, addressed the

Waterloo Rotary Club, Monday, August 10, on "Hawaii." His lecture was illustrated with colored views taken by Mrs. Rohlf on a recent trip to the islands.

Dr. C. F. Little who has practiced medicine at Vail for the past nine years, has disposed of his practice and residence property to Dr. C. A. Dowling of Omaha, and is leaving for the east where he will take post graduate work at the University of Pennsylvania.

Dr. Earl H. DeShaw, a recent graduate of the College of Medicine, State University of Iowa, is locating in Monticello for the practice of medicine. During the past year, Dr. DeShaw has been an interne at the St. Louis City Hospital.

Dr. Fred Moore of Des Moines, was one of the principal speakers at the annual convention banquet of the Iowa section of the American Legion Auxiliary. Dr. Moore spoke on "Child Health and Protection."

Dr. C. V. Hamilton, who has practiced the past two years at Gravity, is moving to Garner, where he will continue the practice of medicine after September 1.

Dr. Gladys A. Cooper of Red Oak, sailed July 29 for an extended European trip, where she will study in Vienna, Budapest and Prague, returning to this country sometime in October. While in Vienna, she will attend the International Congress of Medical Women.

Dr. A. J. Peters, for the past nine years a physician at Walcott, is leaving to enter practice in Chicago, and has arranged for Dr. Theodore D. Englehorn to continue his practice in Walcott. Dr. Englehorn is a graduate of the Medical School of Northwestern University of Chicago, and served his interneship in the Iowa Methodist Hospital at Des Moines. For a year he was resident physician at the Hospital for the Ruptured and Crippled in New York City, where he specialized in the treatment of fractures and in bone and joint surgery.

Dr. Arthur Steindler, head of orthopedic surgery at the University of Iowa, who represented the Iowa City Rotary Club at Rotary International at Vienna, gave a report of the convention at the weekly luncheon of that organization, Monday, August 6.

Dr. S. D. Maiden of Council Bluffs has recently announced that Dr. W. H. Maloy, formerly of Bedford, is now associated with him in the practice of diseases of the eye, ear, nose and throat, at 403 Bennett Building, Council Bluffs.

Dr. S. H. O'Neil is a new doctor who has located in Storm Lake for the practice of medicine and surgery. Dr. O'Neil comes to Storm Lake from Omaha, where he was graduated from Creighton University School of Medicine, and has been taking post graduate work at St. Joseph's Hospital.

Dr. Ewen MacEwen, professor of anatomy in the College of Medicine, State University of Iowa, has been appointed head of the anatomy department, the position having been left vacant by the death of Dr. H. J. Prentiss.

Dr. Walter L. Bierring of Des Moines, presented the address of the day at Leon, July 26, when the cornerstone for the new Decatur County Hospital was laid.

Dr. Glenn J. Anderson, formerly of Des Moines, has moved to Winterset, where he is to be associated in the practice of medicine and surgery with Dr. W. H. Thompson.

Dr. Charles C. Madsen, Jr., a recent graduate of the University of Nebraska College of Medicine, is locating in Emerson.

Dr. George B. Crow of Burlington, was elected president of the teaching staff of the School of Nursing of the Burlington Hospital at the annual meeting of the staff held August 7.

Dr. David F. Shaw, formerly of Humeston, has purchased the office fixtures and furniture of the late Dr. E. A. Couper in Britt and expects to begin his practice there September 1.

Dr. Raymond Jackman, who was graduated last year from the College of Medicine, State University of Iowa, and who recently completed his interneship at St. Mary's Hospital at Kansas City, has located at Fort Dodge, where he will be associated in the practice of medicine and surgery with Dr. E. F. Beeh.

Dr. Otis R. Wolfe, Marshalltown eye surgeon, has been engaged by the Northern Illinois College of Optometry to give a series of ten lectures dealing with ophthalmic surgery, the first one to be delivered at the college on October 1.

DEATH NOTICES

Bellaire, Roy Frank, of Sioux City, died August 11, at the age of forty-seven after an illness of six months. He was graduated in 1909 from the St. Louis University School of Medicine and at the time of his death was a member of the Woodbury County Medical Society.

Couper, Edward Alexander, of Britt, died July 27, at the age of sixty-seven, as the result of pneumonia following an operation for acute appendicitis. He was graduated in 1890 from Rush Medical College and at the time of his death was a member of the Hancock-Winnebago County Medical Society.

Elerick, John Wesley, of Ottumwa, died August 13, at the age of eighty, following a three months' illness. He was graduated in 1890 from the College of Physicians and Surgeons, Keokuk, and at the time of his death was a member of the Wapello County Medical Society.

NEW AND NONOFFICIAL REMEDIES

Abbott Laboratories

Ampules Gold Sodium Thiosulphate-Abbott, 0.01 Gm.

Fairchild Bros. & Foster

Liver Extract-Fairchild.

Mead Johnson & Co.

Mead's Powdered Brewer's Yeast.

HISTORY OF MEDICINE IN IOWA

Edited by the Historical Committee

DR. WILLIAM JEPSON, Sioux City
DR. FRANK M. FULLER, Keokuk
DR. ARTHUR D. WOODS, State Center
DR. WALTER L. BIERRING, Des Moines
DR. NORMAN F. MILLER, Iowa City

Succeeding Generations of Iowa Physicians

When three or more generations in a family are represented in the medical profession of Iowa, it indicates that Iowa medicine is really developing a historical background. In the turn of events from the days of the pioneer to the present the physicians of southeastern Iowa have contributed in large measure to the social, educational and professional advancement of this state. It is gratifying to record in this issue a small tribute of recognition to three families of physicians who have added distinction to the practice of medicine in Iowa through succeeding generations.



WM. A. BOICE J. C. BOICE C. A. BOICE

The Fuller family worshiped at the shrine of medicine during six generations as far as records are available. The first physician in the family was Dr. Noah Fuller, born in New England in the early part of the eighteenth century. The next member of the profession of which there is record is the son of the above, Dr. Robert Fuller, who practiced medicine in the town of Milford, somewhere in New England, where his son, Dr. James M. Fuller, was born. This was the grandfather of our Dr. Frank M. Fuller of Keokuk, and the record states that Dr. James M. Fuller was born in 1792, and graduated from the Dartmouth Medical College in 1826. (His diploma hangs in Dr. Frank M. Fuller's office.) He practiced in Medford, Mass., now a part of Boston, for several years, then moved to Cincinnati, Ohio, where he took a course in homeopathic medicine and was graduated in that city. He came to Keokuk, Iowa, in 1851, and died there in 1870.

His son, Dr. Euclid E. Fuller, was born in Medford, Mass., July 30, 1822. As a young man he worked in a drugstore belonging to Dr. Marchesi in Utica, N. Y. Later he moved to Cincinnati, Ohio, where he married Miss Cecilia Gerard, and came to Keokuk, Iowa, in 1851. He graduated from the College of Physicians and Surgeons of Keokuk in 1862, and immediately enlisted in the army, being appointed assistant surgeon of the 3rd Iowa Cavalry by General Cyrus E. Bussey. (His certificate of appointment is in possession of his son, Dr. Frank M. Fuller.) He served in several battles of the Civil War, and was later given a leave of absence on account of illness. He returned to Keokuk and served in the government hospitals located in Keokuk to the end of the war. On account of his health he gave up active practice after his discharge from the service, and was engaged in the drug business until the time of his death, November 18, 1897.

Dr. Frank M. Fuller was born in Keokuk, Iowa, in 1868, graduated from Parsons College, B.A., 1888, and M.S., 1891; Keokuk Medical College, MD., 1897. He has practiced medicine in the city of his birth ever since graduation. He was a teacher of medicine in the Keokuk Medical College until its merger with Drake University Medical School in 1909, a past president of the Iowa State Medical Society, Fellow of the American College of Physicians, and at present a member of the Iowa State Board of Medical Examiners.

The sixth member of his line is Dr. John Davis



JAMES M. FULLER EUCLID E. FULLER FRANK M. FULLER JOHN DAVIS FULLER

Fuller, born in Keokuk, October 9, 1896, a graduate of the Keokuk high school, State University of Iowa, B.S., 1927, M.D., 1929. After completing two years of hospital interne service, he is now in general practice in Gilbertsville, N. Y.

The photographs of the last four generations of Fuller physicians are reproduced herewith.

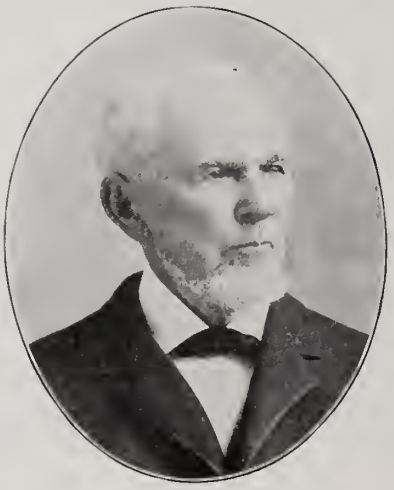
In Washington County two families, Boice and Hull, have each been represented by three generations of practicing physicians.

Dr. James Cooper Boice was born in Columbus County, Ohio, in 1846, enlisted in the Union Army in 1862, at the age of 15 years and 11 months, was discharged one year later for disability after an attack of smallpox, and while at home had a part in the capture of Morgan, the Confederate raider. He reenlisted in the 6th Ohio Cavalry and was with Sheridan in the Shenandoah Valley until the close of the war. He came to Boonesboro, Iowa, in 1865, where he married Miss Mary E. Crawford in 1869, and entered the College of Physicians and Surgeons, Keokuk, in July, 1872. While an undergraduate he practiced for a year with Doctor Lewis of Ridgeport, until 1874, when he moved to Ainsworth, Iowa. In 1876 he was graduated in medicine from the College of Physicians and Surgeons of Keokuk, and located in Washington in 1890, where he has practiced ever since, holding the record of the longest continuous practice in the county, fifty-seven years (1874-1931).

His son, Dr. C. A. Boice, was born in 1877, and was graduated from the College of Physicians and Surgeons (now College of Medicine, University of Illinois) in 1900. In 1901 he joined the Washington County Medical Society, and ever since has been known for his leadership in promoting organized medicine and the scientific advancement of medical practice. The third member of the Boice family to enter the profession of medicine is Dr. W. A. Boice.



HENRY CLINTON HULL JOSEPH H. HULL HENRY CLAY HULL



DR. WM. McCLELLAND



DR. JOSEPH McKEE



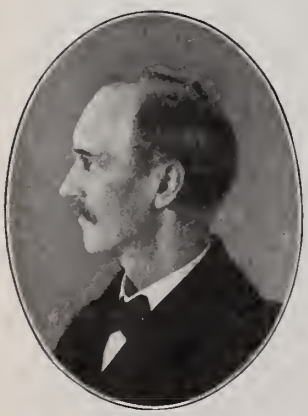
DR. W. H. H. ROUSSEAU



DR. J. R. BURROWS



DR. WM. F. RODMAN



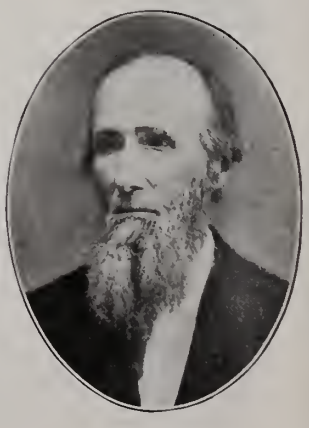
DR. DARIUS SCHOFIELD



DR. O. H. PRIZER



DR. J. D. MILES



DR. A. S. COWDEN

who received the degree of Doctor of Medicine at the State University of Iowa in 1930. After completing his hospital interne service he expects to join his father and grandfather in the practice of medicine in his home city.

A record of three generations of physicians practicing in the same county is unusual in Iowa medical history, but such was the case when the present Dr. Henry C. Hull graduated from Northwestern University Medical School in 1898, and located in Washington, Iowa.

Dr. Henry Clinton Hull was born in Knox County, Ohio, in 1826. He was graduated from the Ohio Medical College at Cincinnati in 1852. The same year he located in Crawfordsville, Iowa, where he maintained a large practice extending into Henry and Louisa counties until his death in 1907.

His son, Dr. Joseph Henry Hull, was born in Ohio in 1850. He attended Kenyon College at Gambier, Ohio. After coming to Iowa he was graduated from the College of Physicians and Surgeons, Keokuk, in 1874, and Bellevue Hospital Medical College, New York, in 1875. Following his graduation he located in Ainsworth, moving to Washington, Iowa, in 1892, where he practiced his profession until 1917, when illness necessitated his retirement, and he died in 1924. He was one of the pioneers in the movement for organized medical societies in southeastern Iowa, being one of the founders of the Southeastern Iowa District Medical Society, and served as its secretary for a number of years. Aside from his high professional attainments, Doctor Hull had a fine attractive personality and was much beloved in his community.

The third member to keep up the high medical traditions of the Hull family is Dr. Henry Clay Hull, who was born in Crawfordsville in 1874. A graduate of the Ainsworth high school in 1888, the Washington Academy in 1891, and the State University of Iowa, A.B., 1894. The older alumni remember his prominence in Iowa athletics in the nineties. He began the study of medicine at the University of Iowa and finished at Northwestern University Medical School in 1898. He located at Washington, Iowa, soon after his graduation, where he has practiced ever since. He served in the Medical Corps, United States Army, during the World War.

Pioneer Physicians of Washington County

At the time of publishing the interesting article of the Medical History of Washington County, submitted by Dr. C. A. Boice, in the July issue, the photographs of some of the early practitioners and medical leaders in the county were unavoidably omitted. They are reproduced herewith with a short biographical sketch of each, furnished by Dr. Boice:

1. Dr. Wm. McClelland, born in Pennsylvania in 1814. Graduate Jefferson Medical College, 1846; began practice in Washington, Iowa, and continued until his death in 1902, at the age of 88 years.

2. Dr. Joseph McKee, born at Athens, Ohio; educated at Ohio Medical College, coming to Washington, Iowa, about 1852. Left Iowa in 1874 for Denver, Colorado, where his death occurred.

3. Dr. Darius Schofield, born in Saratoga County, N. Y., in 1834. Graduate of Albany Medical College in 1858; Bellevue Hospital Medical College, M.D., 1878. Located at Wellman, Washington County, in May, 1866, moving to Washington in 1869; President Iowa State Medical Society in 1884, being the only member of the county who has attained this honor; died of cancer of forehead in 1893, at the age of 59 years.

4. Dr. W. H. H. Rousseau, born at Mill Springs, Ky., 1816. Came to Washington, Iowa, in 1844. Graduate College of Physicians and Surgeons, Keokuk. Practiced in Washington until his death in 1883. Grandfather of Judge C. A. Dewey, United States District Court.

5. Dr. James Reeves Burroughs. Born Pennsylvania, 1833; educated at Wanesburg College. Not a medical graduate. Came to Washington, Iowa, in 1865, where he practiced until his death in 1900.

6. Dr. Wesley Fletcher Rodman, born in Pennsylvania in 1817. Read medicine with Dr. Morehead, Zanesville, Ohio. Graduate Cincinnati College of Medicine and Surgery, 1852. Practiced medicine at Martinsburg, Ohio, until 1856, when he located at Washington, Iowa, where he died March, 1882.

7. Dr. O. H. Prizer, born Pennsylvania, 1814. Graduate Ohio Medical College in Cincinnati, 1846. Practiced in Brighton, Washington County, from 1846 until his death in 1896. Experienced cholera epidemic in 1853, while he was the only practitioner in his community. Active in County Medical Society since its organization.

8. Dr. Joseph Decker Miles, born Maine, 1825. Graduate Bowdoin Medical College 1853. Soon after came to Crawfordsville, Iowa. Served as lieutenant in 11th Iowa Infantry, later as surgeon in the Civil War. Member Iowa Legislature 1868 to 1876. Reported antiseptic treatment of compound fracture (carbolic acid dressings) in 1876, five years before the publication of Lister's work. Moved to Schuyler, Nebr., in 1883. Died, 1894.

9. Dr. Alexander S. Cowden, born Pennsylvania, 1811. Attended Jefferson Medical College, 1833. Came to Washington, Iowa, in 1855, and practiced there until his death in 1879. W. L. B.

THE JOURNAL BOOK SHELF

BOOKS RECEIVED

*ANNUAL REPRINT OF THE REPORTS of the Council on Pharmacy and Chemistry of the American Medical Association for 1930—Chicago, American Medical Association, 1931. —Price, $1.00.

CHEMISTRY FOR NURSES—A Combined Text and Laboratory Manual—By Harry C. Biddle, A.M., Instructor in Chemistry, School of Nursing, Western Reserve University.—336 pages with 74 illustrations.—F. A. Davis Company, Philadelphia, 1931.—Price, $2.75.

*CLINICAL DIAGNOSIS BY LABORATORY METHODS—A Working Manual of Clinical Pathology by James Campbell Todd., Ph.B., M.D., late Professor of Clinical Pathology, University of Minnesota (The Mayo Foundation). Seventh Edition, thoroughly revised. 765 pages with 347 illustrations. W. B. Saunders Company, Philadelphia and London, 1931. Price, $6.00.

*DIABETES: ITS TREATMENT BY INSULIN AND DIET—A Handbook for the Patient. By Orlando H. Petty, M.D., F.A.C.P., Professor of Diseases of Metabolism, Graduate of School of Medicine, University of Pennsylvania. Fifth Revised and enlarged edition, with illustrations and tables. F. A. Davis Company, Philadelphia, 1931. Price, $2.00.

*EINFUHRUNG IN DIE MEDIZINISCHE RÖNTGENTECHNICK—By Maximilian F. Block with 107 illustrations. Published by Wilhelm Maudrich, Vienna, 1931.

*EYE, EAR, NOSE AND THROAT FOR NURSES—By Jay G. Roberts, Ph.G., M.D., F.A.C.S. 213 pages, illustrated with 102 half-tone and line engravings. F. A. Davis Company, Philadelphia, 1931. Price, $2.25.

HEALTH ON THE FARM AND IN THE VILLAGE—By C.-E. A. Winslow, Dr. P.H., Professor of Public Health, Yale School of Medicine. 281 pages, illustrated. The Macmillan Company, New York, 1931. Price, $1.00.

*NEW AND NONOFFICIAL REMEDIES, 1931—Contains descriptions of the articles standing accepted by the Council on Pharmacy and Chemistry of the American Medical Association on Jan. 1, 1931. Cloth. Price, postpaid, $1.50. Pp. 481+LVI. Chicago: American Medical Association. 1931.

*NUTRITION AND DIET IN HEALTH AND DISEASE—Second Edition, revised and reset, by James S. McLester, M.D., Professor of Medicine at the University of Alabama. 891 pages with 10 tables. W. B. Saunders Company, Philadelphia and London, 1931. Price, $8.50.

*SURGICAL CLINICS OF NORTH AMERICA—(Lahey Clinic Number.) Volume xi, No. 2, April, 1931. 248 pages with 88 illustrations. (Issued serially, one number every other month.) Per clinic year (February, 1931, to December, 1931,) paper, $12.00; cloth, $16.00. W. B. Saunders Company, Philadelphia and London, 1931.

*TEXTBOOK OF HISTOLOGY—For Medical and Dental Students. By Eugene C. Piette, M.D., Pathologist and Director of the Laboratory of the West Suburban Hospital, Oak Park, Illinois, with 277 Illustrations, some in color. F. A. Davis Company, Philadelphia, 1931. Price, $5.50.

*THE TREATMENT OF INJURY—Two Vols. By Clay Ray Murray, M.D., F.A.C.S., Assistant Professor of Surgery, College of Physicians and Surgeons, Columbia University, with 196 drawings by the author. Harper & Brothers, Publishers, New York and London, 1931. Price, $5.00.

USEFUL DRUGS—A List of Drugs Selected to Supply the Demand for a Less Extensive Materia Medica with a Brief Discussion of their Actions, Uses and Dosage.—Prepared under the Direction and Supervision of the Council on Pharmacy and Chemistry of the American Medical Association.—Edited by Robert A. Hatcher, Ph. M., Sc. D., M.D. and Cary Eggleston, M.D.—Eighth Edition.—Published by American Medical Association.

**Review appears in this issue.*

BOOK REVIEWS

ANNUAL REPRINT OF THE REPORTS

Of the Council on Pharmacy and Chemistry of the American Medical Association for 1930. Cloth. Price, $1.00. Pp. 91. Chicago: American Medical Association, 1931.

This book is essentially a record of the negative actions of that distinguished body, the Council on Pharmacy and Chemistry of the American Medical Association; that is, it sets forth the findings concerning medicinal preparations which the Council has voted to be unacceptable for recognition and use by the medical profession. Many of the reports record outright rejection or the rescinding of previous acceptances; others report in a preliminary way on products which appear to have promise but are not yet sufficiently tested or controlled to be ready for general use by the profession.

Among the reports recording outright rejection are those on: Avesan (H), formerly Nuforal, a mixture stated to be composed of formic acid, sodium nucleinate, camphor, allyl sulphide and chlorophyll, with traces of salicin and sulphuric ether, marketed with unwarranted claims of usefulness in the treatment of tuberculosis, asthma, and other respiratory diseases; Ceanothyn, once before rejected and still found to be marketed with unsupported therapeutic claims; Collosol Calcium and Collosol Koalin, so-called colloidal preparations, the former an unscientific mixture of unproved value, the latter a possibly dangerous preparation, and both marketed with unwarranted claims; Ephedrol with Ethylmorphine Hydrochloride, an unscientific ephedrine preparation marketed under an unacceptable proprietary name with unwarranted therapeutic claims; Farastan, an unscientific iodine-cinchophen preparation proposed for routine use in "arthritis . . . and Rheumatoid conditions;" Haley's M-O Magnesia-Oil, a magnesia magma and liquid petrolatum mixture in fixed proportions marketed with emphasis on the "M-O"; Lydin, a testicular extract, marketed with claims of value in the treatment of impotence; and Metatone, a shot-gun "tonic" mixture marketed under a proprietary name with unwarranted therapeutic claims.

CLINICAL DIAGNOSIS BY LABORATORY METHODS

A Working Manual of Clinical Pathology by James Campbell Todd., Ph.B., M.D., late Professor of Clinical Pathology, University of Minnesota (The Mayo Foundation). Seventh Edition, thoroughly revised. 765 pages with 347 illustrations. W. B.

Saunders Company, Philadelphia and London, 1931. Price, $6.00.

For the past twenty years Todd's Manual on Laboratory Methods has been recognized as an outstanding aid to students, practitioners, and laboratory workers. The book has been followed through many revisions and has remained outstandingly useful throughout this period. Due to failing health, Dr. Todd has been unable to complete the present revision singly and has fortunately secured the assistance of Dr. Sanford, who for a considerable number of years has distinguished himself in clinical laboratory methods.

The present seventh edition has been entirely revised and portions rewritten so that it includes the newer methods of analysis proved since the publication of the sixth edition. Much of the original text, however, has been retained and the plan of organization of the book has not been disturbed. From an experience in laboratory methods extending over a number of years, it is this reviewer's belief that this volume is the most outstanding and useful of all texts covering this subject of which we have knowledge. No physician employing laboratory methods can afford to be without this book.

DIABETES: ITS TREATMENT BY INSULIN AND DIET

A Handbook for the Patient. By Orlando H. Petty, M.D., F.A.C.P., Professor of Diseases of Metabolism, Graduate of School of Medicine, University of Pennsylvania. Fifth Revised and enlarged edition, with illustrations and tables. F. A. Davis Company, Philadelphia, 1931. Price, $2.00.

This is the fifth edition of a handbook for the diabetic patient, which is written in a simple language stating many facts the patient should know in order to take care of his diabetes.

The method for weighing and measuring the diet is simple and written so that it is easily understood. The chapter on insulin and its uses is thoroughly written, and the hygiene for the diabetic is taken up. Many useful recipes are also given.

EINFUHRUNG IN DIE MEDIZINISCHE RÖNTGENTECHNICK

By Maximilian F. Block with 107 illustrations. Published by Wilhelm Maudrich, Vienna, 1931.

The text is really a primer of X-ray physics and electricity, and the methods of their use. The types of current, construction of machines to deliver the Roentgen ray, the interpretation of newly conceived Roentgen units with approved dosage, are all dealt with extensively. The book is well illustrated with various hook-ups, charts, treatment tables and regular working units. The entire treatise is very technical and only of use to one doing Roentgen work exclusively.

N. B. A.

EYE, EAR, NOSE AND THROAT FOR NURSES

By Jay G. Roberts, Ph.G., M.D., F.A.C.S. 213 pages, illustrated with 102 half-tone and line engravings. F. A. Davis Company, Philadelphia, 1931. Price, $2.25.

The author has had twenty years' experience in training nurses in the practice of head surgery. The neglect in this line of training is evident in most hospitals.

The book is made up of twenty-two chapters covering general hygiene of the eye, ear, nose and throat, as well as the anatomy and physiology of these parts, drugs and bacteria affecting them, anesthesia, antiseptics and operations. The discourse is naturally rather elementary but presents the subject in a clear, concise manner. The author gives his own views and methods concerning such subjects as the use of the eyes in infancy and childhood, and care and training of the voice.

The chapter on bandaging is very good and contains things of interest to anyone doing medical work.

H. J. McC.

NEW AND NONOFFICIAL REMEDIES, 1931

Containing descriptions of the articles standing accepted by the Council on Pharmacy and Chemistry of the American Medical Association on Jan. 1, 1931. Cloth. Price, postpaid, $1.50. Pp. 481+LVI. Chicago: American Medical Association, 1931.

This volume is the annual publication of the Council on Pharmacy and Chemistry of the American Medical Association giving the latest authentic information concerning those of the newer medicinal preparations found worthy of the consideration and use of the medical profession. Each year the Council scans the general articles under which the various preparations are classified and revises these to conform to the latest and best medical thought.

A glance at the preface shows that a number of preparations have been omitted because they conflict with the rules that govern acceptance, because their distributors did not present evidence to demonstrate their continued acceptability, or simply because the manufacturers have taken them off the market. Important revisions have been made in a number of the general articles and in the descriptions of various preparations. Among the new preparations that have been found by the Council during the past year to be eligible for admission to the book are: Amytal and Pulvules Sodium Amytal, 3 grains, barbituric acid derivatives for use preliminary to surgical anesthesia; Thio-Bismol, quinine bismuth iodide, sodium potassium bismuthyl tartrate, and Tartro-Quiniobine, bismuth compounds for use in the treatment of syphilis; Scillaren and Scillaren-B, preparations containing the squill glucosides; two new cod liver oil concentrates; Synephrine, a new vasoconstrictor, and synthetic thyroxine.

"New and Nonofficial Remedies" should be in the

hands of all who prescribe drugs. The book contains information about the newer materia medica which cannot be found in any other publication.

NUTRITION AND DIET IN HEALTH AND DISEASE

Second Edition, revised and reset, by James S. McLester, M.D., Professor of Medicine at the University of Alabama. 891 pages with 10 tables. W. B. Saunders Company, Philadelphia and London, 1931. Price, $8.50.

During the past few years a number of valuable texts dealing with the subject of nutrition and diet have been offered to the profession. The number of these texts reflects the important place which has recently been accorded dietetics in the management of disease conditions. This volume, now in its second edition, discusses the subject in considerable detail and because of its size will be found valuable alike to the general practitioner and the specialist.

Section A of the volume discusses the physiological requirements of the human organism. Section B reviews the available knowledge relative to the commoner food products, while Section C deals with diets and health. The second part of the book, comprising over one-half of the page space, deals with nutrition in disease. In this section will be found a complete discussion of the specific food requirements in various morbid states, with detailed suggestions relative to the planning of a dietary to properly care for these physiologic needs. Part III, covering nearly 100 pages, presents tables and charts of a general nature required for a proper understanding of the general problem of dietetics.

It would seem that the volume was too elaborate to be used as a textbook but as a reference volume for the practicing physician it is, in our opinion, unexcelled.

SURGICAL CLINICS OF NORTH AMERICA

(Lahey Clinic Number.) Volume xi, No. 2, April, 1931. 248 pages with 88 illustrations. (Issued serially, one number every other month.) Per clinic year (February, 1931 to December, 1931,) paper, $12.00; cloth, $16.00. W. B. Saunders Company, Philadelphia and London, 1931.

This number does not cover such a wide range of subjects as usual but the articles all have actual clinical value. Anesthesia with the new methods is extensively discussed from a practical standpoint with a warning that spinal anesthesia is not infallible in the diagnosis of intestinal obstruction. The abdominal section has to do with malignancies of the colon, ulcerative colitis, and common duct stones, emphasizing the need for search of stones in every cholecystectomy. The genito-urinary section deals with complicated internal calculi. As usual considerable of the issue is devoted to thyroid disease with emphasis on points of technic.

F. W. F.

TEXTBOOK OF HISTOLOGY

For Medical and Dental Students. By Eugene C. Piette, M.D., Pathologist and Director of the Laboratory of the West Suburban Hospital, Oak Park, Illinois, with 277 illustrations, some in color. F. A. Davis Company, Philadelphia, 1931. Price, $5.50.

This textbook has been prepared especially for medical and dental students and presents the essential features of morphologic anatomy. The author has incorporated considerable data of physiologic value since he has assumed that "Modern histology is not only a morphologic science; it comprises a good deal of physiology."

The text is written in paragraphic form with the theme titles in each instance in bold face type. There are 277 well chosen figures and diagrams which adequately illustrate the text. The volume appears entirely well suited for the purpose intended.

THE TREATMENT OF INJURY

Two Vols. By Clay Ray Murray, M.D., F.A.C.S., Assistant Professor of Surgery, College of Physicians and Surgeons, Columbia University, with 196 drawings by the author. Harper & Brothers, Publishers, New York and London, 1931. Price, $5.00.

This, the newest release of Harper and Brothers in their series of medical monographs, presents in concise and authoritative form a survey of the treatment of all injuries coming to the attention of the general practitioner. The author assumes that most acutely injured individuals will be seen first by a general practitioner, who must decide the course of treatment to be instigated or must refer such an injured person to a specialist for care. It is not the purpose of this monograph to prepare general practitioners to deal with the more unusual or more delicate type of injury where the technic of a specialist may be required. It is the purpose, rather, to help the physician to so handle these injured persons that they may be returned to work as promptly as possible and that the most satisfactory means to this end may be employed.

It is of interest to note that the author has omitted theoretical discussion and all debate upon the relative merit of various treatments. He presents, rather, forms of treatment which in his experience have proved most useful and ones which may be relied upon for satisfactory functional results.

The author devotes complete sections to soft part injuries—contusions, cuts, burns, etc.; fractures and dislocations; spine injuries; skull fractures; intracranial injuries; and miscellaneous traumata. The drawings prepared especially for this work, are a very valuable phase of the discussion demonstrating definite points presented by the author in his discussion. This type of illustration in a text permits the author to exemplify his methods, stressing the vital points of technic or modifications suggested from a well recognized technic. The volumes remain of pocket size.

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SURGICAL CLINIC: GALL-BLADDER AND DUODENAL ULCER*

HOWARD L. BEYE, M.D., Iowa City

FIRST DAY

With Dr. Powell's help, I am going to try to pinch-hit for Dr. Erdmann.

Lester D. Powell, M.D., Des Moines: This patient is a gentleman 64 years old. His family history is negative other than that his mother died of carcinoma at the age of 92, and his father, of intermittent fever, at 72. His past medical history is negative except that he had pneumonia in 1904.

Approximately six weeks ago his trouble began. He complained of stomach trouble and weakness. He had been well until that time, when he began to get weak. His malaise continued for two weeks. Two weeks ago he became jaundiced and was sent to the hospital, too weak to do any work. He had some cramps in the stomach. He never vomited, but felt nauseated at the time; there was no sour stomach. Jaundice came on suddenly and was not accompanied with pain. The eyes and neck were normal; his teeth showed considerable dentistry. His chest, heart and lungs were normal. The abdomen was symmetrical and slightly tender in the upper right quadrant; there was no evidence of hernia, and no edema. The total acidity of the urine was 95 per cent, with free hydrochloric acid, 75 per cent, and combined acids, 25 per cent. The odor was normal and the urine was clear and colorless. It contained a trace of albumin, no sugar, bile 2+, some epithelial cells, a few hyaline and granular casts. The feces were soft, clay-colored, with a foul odor, and no blood. He was given an Ewald meal. On the first day the motility and peristalsis were normal, as were the tone, contour and size of the stomach. On the second day, at 2 p. m., the stomach was emptied. The bowel showed some spasticity and was tender. A roentgenogram of the gall-bladder showed no filling at any place. Since the twenty-second of last month the stools have become colored; before that they were the color of clay or putty. Bile and stomach are becoming more prominent. The skin is clearing up.

DR. BEYE: There are certain points in this history which I think are well worthy of emphasis. In the first place, this was a practically painless jaundice. The man had been having some indefinite gastric distress, not of very marked severity, and not enough to keep him from his work. One day while working he became jaundiced. The jaundice began in the morning and he said by evening of that same day he was as yellow as a pumpkin. Thus, while there was some distress antedating the development of jaundice, it was relatively insignificant. According to the patient's testimony, he had been in excellent health, so that painless jaundice is one of the significant features of his history.

Next, during a six weeks' period, he dropped from about 185 pounds to 155 pounds, and he says that he lost a proportionate amount of strength. During that period of time he was not vomiting, although he was unable to eat much, so that one questions whether the weight loss could be explained on the basis of dietary difficulty. We have, then, a second significant feature in weight loss.

Next we find that with bed rest and ordinary dietetic management he has overcome the obstruction, to a certain extent, so that the deep jaundice is now over. Bile is finding its way into the intestinal tract, and his color has cleared up appreciably. However, he says he is not improving as fast as he thinks he should. He is still very weak and has no appetite.

The differential diagnosis between obstruction of the common duct from stone and common duct obstruction from some other cause is often a very difficult one to make. The other causes which are likely to produce a common duct obstruction in a man past middle age are malignancy of the pancreas or malignancy of the common duct itself, either at the ampulla of Vater or elsewhere, or

*Presented before the Eightieth Annual Session, Iowa State Medical Society, Des Moines, May 13, 14, 15, 1931.

possibly a malignancy of the stomach, with pressure or involvement of neighboring glands.

The physical examination of this patient did not help appreciably. During his acute trouble he had some tenderness, although it was not marked.

We must learn to recognize the fact that a stone may obstruct the common duct and may be the first symptom of gall-stones. Such a stone may at some time in the past have found its way from the gall-bladder into the common duct and lodged in the common duct without producing obstruction. At some subsequent time, years later, possibly this symptomless stone may produce a symptomless jaundice.

Suggestive of that possibility in this case is the fact that the jaundice is clearing up quite strikingly. We also know that carcinoma of the head of the pancreas and I think more commonly, carcinoma of the ampulla of Vater, will likely produce a jaundice which is symptomless in that there is no pain associated with it.

In this case, the fact that the jaundice has cleared up as much as it has would tend to preclude a malignancy as the cause of the jaundice, because the jaundice produced by a malignancy, once it manifests itself, usually has little tendency to clear up to any appreciable extent although from time to time there may be variation in the depth of the jaundice.

This patient, however, gives the impression of being cachectic. The cachexia, the weight loss and the painless jaundice would lead one to feel that this patient is probably suffering from a malignant obstruction of the common duct rather than an obstruction from a common duct stone, even though the jaundice has cleared up as much as it has. It has not, however, cleared up completely; a very definite icterus is still apparent in the skin and in the sclera. We would, therefore, be inclined, on the basis of our findings, and more particularly the history, to make a diagnosis in this case of malignancy rather than a common duct stone.

However, I do not feel that this diagnosis is sufficiently definite but that this patient should be advised to have an operation. I feel that he is entitled to the benefit of the removal of the stone from the common duct, if such is present. We might say, "Well, has this stone passed, since there is no more obstruction?" I feel that in all probability the stone has not passed, because the jaundice still persists to some extent. I feel that nothing would be lost, however, by watching this patient for a period of several weeks. If the jaundice entirely disappears and there is no recurrence, the patient could be carried on indefinitely without operation. If after observation for a few weeks the jaundice persists or becomes more intense, however, then I feel that this patient should be advised to have an operation. If the obstruction is malignant, of course, there is nothing that can be done for him in a curative way, but if it is a common duct stone he may obtain complete relief.

A patient suffering from a malignant obstruction of the common duct may sometimes be given considerable palliation, if he is deeply jaundiced and the jaundice is associated with intolerable itching, as it sometimes is.

In the last two years I have had under my observation two patients suffering from malignancy beginning at the ampulla of Vater, producing complete obstruction with intolerable itching. Anastomosis between the gall-bladder and the stomach completely relieved the jaundice. In one patient this relief has existed over a period of a year and a half. He is quite comfortable and is able to work. While he is slowly losing ground, I think that the operation has been of decided benefit to him. The second patient, operated upon about two and a half months ago, has had a similar course.

I do not think we should turn a patient down merely because he has a carcinoma of the biliary tract which causes obstruction, if that obstruction is producing symptoms which may be relieved. The symptom for which a patient most often demands relief is the intolerable itching so frequently associated with intense jaundice.

DR. POWELL: This patient is a lady sixty years of age. Her family history and past medical history are negative. In 1921 she complained of stomach distress from too much acid and intolerance to acid foods. Four years prior to that time she had had a similar attack with considerable distress. Following her examination in 1921 the diagnosis was an old pulmonary tuberculous condition and colitis.

In May, 1924, she had attacks of pain in the upper right quadrant, at which time the examiner said that he could feel the gall-bladder. He advised surgery; it was refused. She improved on medical management. In March, 1925, she had considerable tenderness in the upper right quadrant. In August, 1927, she had pain in the upper right quadrant, which radiated to the right scapula, with much gas, belching, fullness, distress after meals and considerable sour stomach. On examination at that time the examiner was able to feel the grinding of stones in the gall-bladder.

Since that time she has had gall-bladder distress, food intolerance, gas, and bloating, and has been treated medically, with lavage, and so forth.

The urine examination was negative. Blood

examination showed 75 per cent hemoglobin with 4,500,000 red cells and 6,900 white cells.

Dr. Beye: The story of this patient's abdominal condition is typical of gall-bladder difficulty, with the pain in the right upper quadrant radiating through to the scapula, the fact that the gall-bladder was palpable during an acute attack, and the very unusual circumstance of the examiner being able at a subsequent time to palpate the gall-stones lying in the gall-bladder, through the abdominal wall. I am sure there are not many of us who have had that experience, although there may have been times when we thought we might be able to palpate the gall-stones through the abdominal wall. The only other case I have ever seen was one in which the gall-stones had found their way out through the gall-bladder, through a perforation into a local abscess lying under the abdominal wall, and these could be palpated.

Dr. Powell tells me that when he was an interne serving with Dr. Rowan, he was able to palpate gall-stones in a gall-bladder, and this was substantiated by Dr. Rowan's palpation in the same case. That is surely a rare experience.

Another interesting thing about this case is that the gall-stones in the gall-bladder have been demonstrated clearly by the x-ray without the dye injection, so the diagnosis is definitely substantiated by the x-ray examination.

This is a case in which operaton should surely be advised, and it has been advised in the past, but up to the present time the patient has seen fit to refuse it.

We must learn, I think, that the diagnosis of gall-stones which are producing symptoms should lead us to advise operative treatment in our patients, because the medical management of such a condition is, for all practical purposes, futile. The failures in the treatment of gall-bladder disease are due in a large measure to delay in operative care. The failure to obtain proper relief of symptoms following surgery is due to some extent to the complications of gall-bladder disease, such as chronic pancreatitis, chronic hepatitis, adhesions around the common duct, or a stone finding its way into the common duct. These are only some of the things which may develop in a patient who has had gall-stone attacks over a period of time. They complicate the pathologic picture and greatly increase the technical difficulties of surgery and the operative risk. Therefore, the time to operate upon the gall-bladder is early in its pathologic course. We cannot prophesy just when a gall-bladder which has been causing symptoms may be responsible for the development of a complicated pathologic condition.

Just a word about cholecystography before we close this brief presentation of these two cases of biliary tract disease. We consider this is a most valuable diagnostic aid. It will often aid materially in the demonstration of gall-stones in the x-ray examination.

We have learned this in our work, that if cholecystography demonstrates a normally functioning gall-bladder, the patient, in the vast majority of cases, does not have gall-bladder disease. We have learned that to our discomfiture. We have operated upon several patients in whom the Graham-Cole test showed a normally functioning gall-bladder. We have said, "Here is a case where the test has fallen down. The story is so definite, the physical findings are so clear, that we will make a diagnosis of gall-bladder disease in the face of the negative x-ray findings." We have found only two instances of a pathologic gall-bladder in which the Graham-Cole test showed us a normally functioning gall-bladder.

This next patient is one who, briefly, has a history of peptic ulcer, dating back to the time when he was about twenty-three or twenty-four years old. He is now forty-one. His symptoms persisted for two or three years, obstruction finally developing at the outlet of the pylorus. Gastro-enterostomy was performed in 1916 when he was twenty-six years of age. He was relieved for about a year and a half, and then the symptoms of ulcer manifested themselves again, and they have persisted intermittently since that time.

Following his gastro-enterostomy, he had one attack of excruciating pain, suggesting an attempt at perforation. He has had two attacks of hemorrhage following his gastro-enterostomy. In spite of medical management, which has been intensively carried out, he does not get relief. His urine contains a very high percentage of free and combined acid. He has been examined many times radiologically, and no evidence of a gastrojejunal deformity has been found. There has been present constantly the evidence of his old ulcer in the region of the duodenum. The interpretation of the picture has been that of a recrudesence of the symptoms of his original duodenal ulcer.

This patient is of the typical ulcer type, in that he is slender, he has a long, narrow chest; he is a man who works intensively. He uses up his physical and nervous reserve, and he has noted that he has more trouble when he tries to do two days' work in half an hour. He also is (and I emphasize this over and over again) a heavy cigarette smoker. He smokes about a package of cigarettes a day. Not that the cigarette smoking in itself is necessarily of any peculiar significance, but it is a manifestation of the type of individual.

Why should a patient have trouble following a

gastro-enterostomy? My own feeling is that this patient is probably suffering from an ulcer at the margin of the stoma, either a marginal ulcer or, as we see it more frequently, an ulcer directly opposite the stoma or some distance above or below the point of opening into the jejunum.

I question very much if this is a recrudescence of his duodenal ulcer. X-ray examination shows that the stoma of the gastro-enterostomy is functioning very satisfactorily. If this is true, it is not likely that the original ulcer, relieved as it was for a year and a half, would become activated.

The development of a marginal ulcer is the bugbear of the surgical treatment of peptic ulcer. I think that is what we have to deal with in this case, even though the x-ray examination cannot prove it. In our experience, it often cannot prove it unless the ulcer is right at the stoma and produces a definite distortion of it. I believe this patient should be advised to have an operation. I believe that if this is a marginal ulcer, it will not get better, since it has now become chronic. There is no reason to feel that he will get better without operation since he has not improved under intensive medical management.

Just what operative treatment should be carried out would be determined by the findings at operation. My own feeling about gastro-enterostomy in peptic ulcer is that it should be a measure reserved for those cases which have been given very careful and thorough medical treatment over a long period of time. My reason for this opinion is that a large percentage of patients, having the ulcer diathesis, will develop an ulcer at the side of the stoma following gastro-enterostomy, and they will not improve, but will become worse at some time in their subsequent course following gastro-enterostomy.

MALIGNANCIES OF THE LARGE INTESTINE AND STOMACH

SECOND DAY

Through the courtesy of Dr. Griffin of Des Moines I am presenting this very interesting case of a congenital arteriovenous aneurysm. The patient states that this has been present as long as he can remember, and that there has been practically no change in it as he has grown older.

Distended, enlarged veins are prominent on the back of the hand and the lower portion of the forearm. Close inspection shows pulsation in some of them. There is a palpable thrill in these veins extending up to about midarm, and, in addition to the thrill, as one would expect, a bruit may be heard.

It is interesting to note that the disfigured arm is longer than the normal one, showing that during the period of growth an increased activity has been stimulated, which has caused an increase in length of approximately an inch or so. Yet there is very obviously an atrophy of the musculature which, in a measure, is probably from disuse, since the patient does not use this arm as much as the normal one. This has produced definite atrophic changes. As Dr. Griffin describes it, "there is too much blood and not enough nourishment," and I think that is a very apt way of expressing it. The evidence of the atrophy is found in color change and in an ulcerated finger. He first injured the distal end of the finger, and following that trauma a spontaneous amputation occurred, a necrosis which took place because of insufficient nourishment through normally developed capillaries. The condition developed not unlike the change that one sees in leprosy, for example, or sometimes in Raynaud's disease, a necrosis on the basis of insufficient oxygenation, a vascular disturbance of such a degree that it will go on to a gross necrosis.

After the amputation had taken place he subsequently injured the dorsum of the finger. This happened two or three months ago, and he has, in consequence, a chronic ulcer, a trophic ulcer, which is very sluggish, has little tendency to heal, and is not unlike the circulatory ulcers on the lower extremity from vascular disturbances.

This may properly be classified, I would say, as an unusual form of angioma. In reality it is an aneurysm because there is gross communication between the arterial and venous systems. The chances are that there are many communications. If the communication were limited to a single area, and if that area could be determined, then treatment could be instituted and an attempt made to divide that point of communication. Unfortunately, that is not likely to be true, and if it were, the difficulty in determining the point of such communication would be unsurmountable.

This varies from the much more common congenital blood vessel disease or disturbance, namely hemangioma simplex, in that the gross communication between the artery and vein does not exist in the latter condition. The other type of hemangioma, which is not uncommon and not infrequent, often involves the upper extremity, just as we find in this instance.

As far as treatment is concerned, I know of nothing which will offer any great chance for benefit. This patient had been working right along until he received the injury to his finger. He is a miner, and it has not interfered with that type of work.

This lady, who is sixty-five years of age, is pre-

sented through the courtesy of Dr. Noble and Dr. Powell. She presented herself first to Dr. Noble, complaining of spotting and incontinence of urine. She felt quite well until about two months ago, at which time a pain developed in the left lower portion of the abdomen. Following this she began to have a slightly bloody-watery discharge from her vagina and also passed some clots of blood, but with no foul odor. She has had some incontinence of urine for about a year, so that she finds it necessary to wear a pad. She has had no pain or smarting on urination, but has passed a small amount of blood in the urine for the past month. Her general condition, she feels, is very good. She has lost no weight, her strength is normal for her, and she has a good appetite.

Another feature of her condition which may be of considerable significance in relation to the abdominal condition is the fact that about five years ago she began to note a change in the shape of her lower extremities. They began to bow, and this bowing has developed progressively but not rapidly over this period of time. This has been associated with some aching pain around the pelvis and around the sacral region, and she finds it rather difficult to get up and down stairs because of the deformity which now exists.

She says that about eighteen years ago she was told that she had a pelvic tumor, and she knows herself that there has been something in the abdomen over this long period of time, and that it has been of considerable size for several years, but only during the past two or three months has she had bleeding from the vagina and bloody urination.

The general examination is essentially negative, and the blood picture is quite normal, with 75 per cent hemoglobin, 420,000 red cells and 9,000 leukocytes. Her Wassermann test is negative, and the urine is essentially without import.

The significant findings are, first of all, a peculiar shape of the forehead, rather square in contour. There is no tenderness on pressure and she does not have headaches. The second feature of the osseous system is also very obvious, the marked bowing of the lower extremities, a bowing which involves the femur and the tibia of both legs, but particularly the femur, and apparently the region of the hip joint is especially affected. This is so striking that it is impossible for her to sit in a chair without crossing her legs. On palpation we find very distinct anterior bowing of the tibia which you can all see, I think, but the bone in itself does not seem to be greatly increased in width or size, and its surface is smooth. The left tibia is more bowed than the right; otherwise the osseous system presents nothing appreciable on palpation.

She shows a conspicuous degree of abdominal protrusion, and a smooth, rather tense abdominal tumor can be palpated, the upper limit of which is slightly above the umbilicus, the lower limit disappearing into the pelvis. A fluid wave can be percussed through it, and it has all the earmarks of a cyst and is probably, therefore, an ovarian cyst.

What is the relationship, if any, between these two conditions, and what is the condition that we find in the osseous system in this patient? The picture presented by this patient is characteristic of the bone condition spoken of as Paget's disease; the progressive change, the long period of time that has elapsed, the fact that the general condition of the patient is unchanged to any appreciable extent, the picture presented by the protuberance of the parietal bones, the bowing of the extremities and the characteristic walk of Paget's disease.

As far as the abdominal lesion is concerned, the story that the tumor has existed for a period of eighteen years, without much change until recently, when bleeding has occurred, would make one surmise that she has had an ovarian cyst for these many years which possibly has progressed to malignant change. If this is true, we will have to take into consideration in the differential diagnosis, the possibility that the condition involving the osseous system is metastasis from a malignant tumor of the ovary. It is a differentiation which has to be made every once in a while because the two conditions, Paget's disease and cancerous metastasis to bone, may resemble each other quite strikingly.

The x-ray picture of the skull is characterized by the fact that there is a very indefinite outline, rather fuzzy in character, and involving all the bones of the cranium except the mandible. It is impossible at any point to get a clean-cut, distinct outline of bone, and the substance of the bone has this same indefinite hazy character.

The lateral view of the skull shows the same condition, possibly more noticeable in the anterior portion than in the posterior, but the whole vault is involved in the same characteristic picture.

Pictures of the chest are essentially negative. What we can see of the scapula on both sides and the clavicle and the ribs shows no involvement, and the spine seems to be clear.

A picture of the pelvis is very interesting. It shows a conspicuous degree of bilateral deformity of the upper ends of the femurs, considerable change in the angle between the shaft and the

neck, and a deformity of coxa vara. The pelvic bone is involved in the same process, so that it is impossible to get a clean-cut, definite outline of it.

The tibiae are also affected but not to the same degree, except for the evidence of deformity. The degree of deformity which has taken place in this patient would preclude a diagnosis of metastatic invasion of the osseous system from a malignant tumor of the ovary. A change in the contour of the bone from malignant deposit within it, metastasized from some distant primary growth, is relatively uncommon. A pathologic fracture, on the other hand, is a fairly common occurrence, and it is not unusual for a patient to have a pathologic fracture as the first manifestation of malignant deposit in the bone from some primary cancer. The changes which have taken place in this patient, however, would be most unusual in a malignant bone involvement.

Another point which is an argument against a diagnosis of malignancy is the fact that the tibiae have been affected. An interesting thing about metastasis of cancer to bone from a primary lesion, is that we find the upper half of the femur, particularly around the region of the neck, very commonly invaded, as well as the pelvic bones; while the vertebrae, the skull and the ribs are only occasionally attacked. It is unusual, however, to find metastasis in the lower half of the femur, and rare to find it in the bones of the leg and the bones of the forearm and the lower half of the humerous. Hypernephroma is an exception to metastatic involvement of the skeleton from a primary lesion. Hypernephroma apparently can attack any of the bones. We find hypernephroma not infrequently metastasizing to the upper end of the tibia, sometimes the lower end of the radius and elsewhere.

Summing up the findings in this case, I feel that this patient is suffering from an ovarian cyst of years' duration, which has possibly gone on to malignant change, although the evidence is not conclusive.

Secondly, she is suffering from an independent condition, Paget's disease, osteitis deformans. I believe the tumor should be explored. I feel that she is entitled to operative relief, and as far as the Paget's disease is concerned, there is nothing which we can do to change its course. It will progress over a period of time, and there is no medication which will affect it materially, although I feel she should be given cod-liver oil, and the use of the ultraviolet ray may be of some help in slowing the process. Just what Paget's disease is, we do not know, its etiology is as yet undetermined.

In the last few years, however, there has been observed a condition which is beginning to explain some of the bone lesions that in the past have been difficult to understand and to cope with; namely the relationship between hyperfunction of the parathyroid glands, and the condition which in the past we have called osteitis fibrosa. This work has developed since the war. There are now on record, I suppose, twenty cases. The parathyroid glands among other functions, control the metabolism of phosphorus and calcium. It has been proved that certain patients with diffuse osteitis fibrosa have been suffering from an adenoma of a parathyroid gland.

Because of the increased calcium metabolism incident to the hyperparathyroidism, the calcium in the system is mobilized and is excreted in large quantity. The blood serum contains an excessive amount and an excessive amount is passed in the urine, in consequence of which the calcium is taken from the bone, and the bone undergoes certain structural changes because of the lack of normal inorganic salt support, producing the picture which in the past we have called, and still do, osteitis fibrosa but which, in reality, is only the manifestation of this general disease.

I cannot help but feel that in years to come a relationship will be proved between Paget's disease and a dysfunction of the parathyroid gland. To date, the patients in whom this relationship has been proved have been young individuals, the individuals in whom we find osteitis fibrosa.

It may be that in older individuals, whose skeletons are more stable, hyperparathyroidism develops and changes take place, but they cannot be so profound as in the younger individual. Deformity and bone changes may occur, but to a limited degree and over a long period of time. That is only an hypothesis, it cannot be more.

Knowing as we do, however, that the hyperactive thyroid gland may be only slightly so, and the disease may be present over a long period of time, with symptoms difficult to recognize, and knowing that a hyperactive thyroid gland may from time to time become acutely activated and then subside, I think it is fair to assume that the same thing can happen in a hyperfunctioning parathyroid. I cannot help but feel that in the study of dysfunction of the parathyroid glands and its relation to some of the bone conditions which in the past have been so difficult to understand, we may be on the track of something very well worth while.

PREVENTIVE MEDICINE AS RELATED TO THE MEDICAL PRACTITIONER

D. C. Steelsmith, M.D., Des Moines

There are several catchy slogans or phrases that might have been used as the title of this paper. For example: "This Is 1930," "Things Do Move," "The Recent Trend of Medicine," "Modern Medicine," "Changing Medical Practice," etc., etc.

Progress and changing of the order of things is always present. The active practitioner of fifty years ago would be handicapped to meet the common exigencies of the modern hospital and medical practice of today. The graduate of twenty-five years ago who has not put forth much effort in study and post-graduate work finds himself unable to compete successfully with the recent graduate, polished to the nth degree in the recently developed branches of Heliotherapy, X-ray and Bacteriology.

The rapid advancement made in public health or preventive medicine has been responsible for many changes. The public has been quick to appreciate the benefits accruing from preventive medical activities and are now individually as well as collectively demanding the further application of these principles.

Thinking persons realize that the practice of medicine is no more a static condition than any other human relationship.

The physician of twenty-five years ago obtained a large part of his income from the treatment of typhoid, diphtheria, smallpox and infantile diarrhoea. While preventive medicine has reduced the physician's income from these sources, the present day physician has more practice of a better kind in the administrative measures which, as aforementioned, are being more and more demanded by the public. The prevention of disease is in keeping with the tenets of the medical profession and while the benefits accrue to the public, the practitioner must deserve compensation for his services. Therefore, we will discuss the benefits accruing to the public as well as the general practitioner in the prevention of disease.

We know from experience that typhoid vaccine will prevent typhoid fever. The rapid mode of transportation allows many opportunities for infection that did not maintain years ago. General sanitation concerning the handling and manufacture of foods has been developed but still we find most epidemics of typhoid originate from the sporadic case frequently acquired at a distance from the patient's home.

Practitioners may well interest themselves in seeing to it that their patients' families are all protected against typhoid before leaving for a vacation tour, thereby adding as much or more to his income than he formerly obtained from the occasional case of typhoid.

In the prevention of smallpox he again has a chance of being of service to a family in saving much time as well as money by vaccination against smallpox.

It has been estimated that the average income to the physicians of Iowa from each case of diphtheria occurring is $20.00. Many cases of diphtheria are mild and are not seen by a physician. Some few cases are treated without pay. But few physicians cannot recall the case where he furnished eight to twelve dollars for antitoxin and was never paid for his services, so upon an average the estimate is not far wrong.

The 2,800 general practitioners officiate at approximately 45,000 births in Iowa each year or approximately sixteen each per year. If each physician would interest himself in the immunization against diphtheria of the sixteen babies before they reached a year of age, his income would compare favorably with his past income from the treatment of cases of diphtheria and he again would be rendering his patients a real service that would save them money as well as lives.

Scarlet fever may be prevented and while the death rate seems not high from this disease directly, when the indirect complications are considered, a great service may be rendered in the prevention of scarlet fever.

In order to accomplish these things it will not be necessary to violate any word or clause of our code of ethics.

It is sometimes necessary to demonstrate the benefits of certain procedure before the public will appreciate the value thereof. After the value of certain procedure is manifest, we are all aware of the fact that the public will demand a continuance of the procedure and are always glad to pay a reasonable sum for the service.

The following statement seems paradoxical: Physicians should do more free work to be of more service to their people, and to make more money for themselves.

How many boys and girls of pre-school age are there in your families who have physical defects that will not only interfere with their school work but will cause conditions that may handicap them for life?

The physicians that interest themselves in the frequent physical examination of the children of their families or in connection with the "Summer Round-Up," will find dietetic, hygienic and surgical corrections that will again add to his exchequer in work not done at present. Physical defects of

the growing child may be discovered by careful physical examination during each year of school life.

A study of physical defects found in a half million school children was made recently and the following percentages maintained:

Teeth defects	41.19	Ear defects	3.02
Tonsils	22.28	Breathing defect	3.1
Adenoids	18.	Spinal curvature	1.8
Eye defects	17.2	Anemia	1.57
Malnutrition	12.12	Lung disease	.78
Enlarged glands	4.5	Heart disease	.57

Here lies a fertile field but partially cultivated by the medical practitioner.

Much more might be said pertaining to the relation of prevention medicine to the general practitioner, but suffice it to say that the public is demanding this service and the leaders of the medical profession have indicated that the practitioner who does not interest himself in the practice of preventive as well as curative medicine will lose the chance of increasing his earnings, as well as the chance of being of greater service to his fellowman.

Symposium on Fractures*

I

FRACTURES OF THE FOOT AND ANKLE

C. O. EPLEY, M.D., Spirit Lake

General Considerations

The foot and ankle are probably the most important weight-bearing structures of our body. The line of gravity follows downward along the crest of the tibia, through the center of the astragalus, through the arches of the foot, and thence to the ground. When the feet are parallel, the line of gravity runs forward along the second metatarsal bone, or slightly to its inner side. When the toes are turned outward, the line of gravity falls to the inner side of the foot, putting a strain on the inner arch.

The ankle joint proper has only anterior and posterior flexion, and very little lateral movement, except probably in extreme extension of the foot. Lateral movement comes from articulation of the astragalus with the os calcis.

The arches of the foot form a half cone, extending anteriorly, posteriorly, and externally. The malleoli simply keep the astragalus in place laterally, balancing the weight of the body on the crown of the arches. Any fracture of the ankle that widens the joint throws the weight of the body off center and weakens the foot. In walking, the plantar and dorsal flexion of the foot is greater when the feet are parallel than when the toes are turned outward. Thus, if in ankle fracture there is improper reduction of anterior and posterior fragments of the tibia, and probable associated dislocation of the astragalus, anterior and posterior flexion is limited. In order to obtain equal strides in walking, this limited flexion tends to throw the toes outward and roll the weight over the inner side of the foot, which strains not only the arch of the foot, but also the knee joint.

In simple fractures of the foot and ankle, we must keep in mind the normal anatomy and function, and in compound fractures, the possibility of infection. We must also consider possible disability of the patient with regard to his particular vocation.

Radiographs should be taken, if possible, before and after reduction. Views of the whole foot and ankle, and half or two-thirds of the leg, should be taken in all severe injuries, in both lateral and anterior-posterior positions. In injuries of the os calcis and astragalus, oblique views are sometimes necessary to determine whether there is a fracture. The importance of radiography in fractures cannot be overemphasized.

In all cases we should endeavor to make early reduction, under anesthesia if necessary, either general or by blocking the great sciatic nerve. Early and complete reduction lessens pain and swelling, is more easily accomplished, and produces earlier and firmer union.

Fractures of the Foot

Fractures of the phalanges are treated by the use of splints and extension so as to maintain reduction.

Fractures of the metatarsal bones are common and are usually caused by direct violence. The shape of the foot should be restored to normal, and reduction maintained by plantar-cast mold and splint, or by plaster cast of foot extending above the ankle. From five to eight weeks should be allowed for healing.

Fractures of the cuneiform, cuboid and scaphoid bones occur from direct or indirect violence, and often in conjunction with fractures of other parts of the foot. There is usually little displacement and the foot needs only to be placed perpendicular to the leg, with slight inversion, and the bottom of the foot molded in a cast applied from the toe to below the knee. From eight to ten weeks should be allowed for healing, and an arch sup-

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port worn when weight bearing is begun until all tenderness is gone.

Fractures of the Astragalus. Fractures of the astragalus are usually caused by great violence, as from falls, and are frequently associated with considerable injury to soft parts. The varieties are: fractures of the neck, with or without rotation of the posterior fragment, fracture of the body, and fracture of the posterior process, or os trigonum.

Fractures of the neck are usually transverse, with very little displacement, except sometimes, backward; or the posterior fragment may be rotated. Fractures of the body are usually comminuted, and not much displaced.

The os trigonum is an anomaly in man and will not be considered.

Fractures of the astragalus cause tenderness and swelling, and pain on weight bearing and flexion of the foot. Sometimes crepitus can be felt on lateral motion. X-ray is the only means for proper diagnosis. If there is much displacement, reduction is difficult, and good function is hard to obtain. Ankylosis is sometimes permanent. In reduction, care must be taken to relieve and protect the soft parts which are frequently injured in such fractures. The arch should be well molded in cast or plaster splint, with foot at right angles to the leg and slightly inverted. Support should extend to below the knees. A box-splint, pillow, or side-splint, may be used until the swelling has gone down. Six to ten weeks should be allowed for healing.

Fractures of the Os Calcis. Fracture of the os calcis is the most frequent of the tarsal fractures. It is caused from falls from a height, severe contraction of the calf muscles, direct violence, and forcible inversion of the foot.

The varieties are: (1) avulsion, by pulling upwards of the calf muscles; (2) transversion, caused by direct violence; (3) compression, more in anterior half of bone; and (4) sustentaculum, usually associated with other fractures of the foot.

The significant symptoms are loss of lateral motion and thickening of the bone below the external malleolus. Displacement and disability are often slight, and radiography should not be neglected in these cases. If no displacement occurs, prognosis is good as regards function. If much displacement occurs, poor results are likely to follow unless operative treatment is given. Fractures without displacement should be put into a cast extending from the toes to the knee. With displacement upwards, reduction must be made under anesthesia by some operative procedure.

If a spike-like instrument is thrust through laterally, in front of and above the attachment of the tendo achillis to the os calcis, traction can be made upon it to reduce and maintain the broken fragments. Tenotomy of the tendo achillis may be done to relieve upward pulling of the muscle; or, a nail may be driven additionally to help hold the fragment in place. The ankle is then put up in a cast extending from the toes to five or six inches above the knee, with plantar flexion of the foot and slight flexion of the knee.

Where reduction cannot be made by traction as just described, open operation should be performed and the fragments sewed together through drill holes.

Fractures which cause thickening of the bone below the external malleolus can be reduced by Cotton's method, which consists of placing the inner surface of the foot on a sandbag, and then placing a piece of thick felt on the outer surface of the os calcis, and upon it making repeated blows with a wooden mallet until the deformity is reduced by the impaction thus produced.

In milder fractures with displacement, well molded plaster casts will prevent deformity and allow proper healing. From six to eight weeks should be allowed for healing.

Fractures of the Ankle

Ankle fractures may be classified grossly as simple and compound. Platt's classification is as follows:

A. Fractures of the malleoli
   1. Isolated
      (a) Fibula
      (b) Internal malleolus
   2. Combined
      (a) Low bimalleolar without displacement of the astragalus
      (b) Bimalleolar with displacement of the astragalus (Pott's, Dupuytren's fracture)

B. Fractures of the weight-bearing surface of the tibia
   1. Isolated
      (a) Posterior marginal fracture
      (b) Anterior marginal fracture
   2. Combined
      (a) Posterior marginal fracture with fracture of the malleoli
      (b) Anterior marginal fracture with fracture of the malleoli

The most common ankle fracture is the fracture of the fibula one or two inches above the tip, with fracture of the internal malleolus or tearing of the internal lateral ligament (commonly known as Pott's fracture).

In fractures of the ankle, the foot may be either inverted, or everted, and the interosseus ligament may be torn. Falling from a height is likely to

drive the astragalus up between the bones of the leg and tear the interosseus ligament, with some upward splitting of the articular surface of the tibia. With this, there may be dislocation of the astragalus anteriorly, posteriorly, or laterally. Lateral displacement is most frequent, because the lateral articular surface is narrower than the anterior-posterior articular surface.

In all severe ankle sprains and fractures, skiagrams should be made in both anterior-posterior and lateral positions, and should include the foot and two-thirds of the leg. Often associated fractures can be found away from the main injury.

When both the malleoli are fractured, the foot should be put up at right angles to the leg with inversion absent, or very slight. If only the internal malleolus is fractured, the foot should be put up in marked inversion, in order to bring the parts in coaptation. If only the external malleolus is fractured, the foot may be everted sufficiently to make proper reduction. Where the malleolar fragments cannot be retained in place, a nail or screw may be driven through the fragment into the shaft of the bone.

If there is an anterior split of the tibia, or lipping of the articular surface, the foot should be put up in acute dorsal flexion, with a medium amount of inversion. This position is also correct with posterior dislocation of the astragalus, unless a posterior tibial fragment is loose and drawn down, in which case countertraction may have to be used and the foot left at right angles to the leg. When fragments cannot be maintained in proper position, nails or screws may be used or open operation performed.

If there is much swelling, a temporary splint or pillow may be used for a few days and then a cast applied from the toe to the knee, and in most cases, to four or five inches above the knee, with the knee in partial flexion. Extending the cast above the knee in this way keeps the foot from rotating and disturbing the ankle, and also takes away the pull from the gastrocnemius muscle. A cast should always be split immediately, bilaterally or anteriorly, to allow for inspection and after-treatment. Five to ten weeks should be allowed for healing.

With compound fractures we should be very conservative. Amputation may be necessary in elderly people when there is great comminution of fragments. In open fractures, the wound should be cleansed with some solvent solution, the tags cut off, and some of the looser fragments removed, bleeders tied, and free drainage instituted. Stitches may be placed, but not tied until three or four days later. Windows should be cut in the cast for dressing, and in some cases, special apparatus should be used to maintain reduction of parts.

After-Treatment of Fractures of the Foot and Ankle

After complete reduction is accomplished, and splints applied, a skiagram should be made in both positions, and again after a few days, if there is any doubt as to whether fragments are being held in place.

As soon as acute reaction has subsided, from three to ten days, massage should be started, and if permissible, passive motion in the knee instituted. This should be done every other day until well. Passive motion should be started in most cases in two or three weeks, and active motion after five weeks, with hand support in some cases. Radiant light may be used with massage to increase the blood supply. Crutches should be used soon after swelling has subsided, in order that the patient may have some exercise.

Massage and motion reduce callus formation to the minimum, and prevent discomfort in the limb, joint adhesions, and ankylosis.

Much of the disability resulting from fractures is caused by inactivity, prolonged immobilization, early weight bearing, misplacement, and over-production of callus. Sir Robert Jones says, "the presence of tenderness over the callus at the site of fracture is a definite indication that the callus is still soft and will yield on the application of strain." I also believe that if tender callus is irritated by weight bearing or over-active motion, new bone formation occurs at the point of irritation, and extreme tenderness and limitation of motion are produced.

Weight bearing should not begin too early. It is better to wait for five or six weeks to ten or more weeks, if necessary, until tenderness has quieted down. Do not allow the patient to bear weight on a tender, soft ankle or foot. Arch supports should first be used, together with crutches, to relieve strain. In many cases the sole of the shoe should be raised one-fourth of an inch on the inner side, so as to throw the weight outward and prevent eversion of the foot.

In some cases braces should be employed to take off some of the strain until the ankle gets strong enough to support itself. Weight bearing should be employed gradually, and not pushed too hard.

During winter months, the patient may need cod-liver oil, ultra-violet radiation, and blood tonics, together with good food and exercise, which stimulate healing to its maximum.

Summary of Treatment

1. Early reduction and correction, assisted by radiography.

2. Maintaining position of fragments
3. Massage and passive motion very early after reduction
4. Elevation and temporary splinting, when there is much swelling
5. Active motion of ankle and knee after fifth week
6. Removal of fixation apparatus as early as possible, usually after fifth week
7. Delayed weight bearing until callus is firm and discomfort has disappeared
8. Judicious use of electric stimuli, diathermy and mechanical support.

II

FRACTURES INTO THE KNEE JOINT

W. Eugene Wolcott, M.D., Des Moines

Two types of fractures into the knee joint will be discussed, namely, intracondylar fractures of the lower end of the femur, and compression intra-articular fractures of the upper end of the tibia. Both of these types of fractures are becoming more common with the growth of industry and the rapidly increasing frequency of automobile accidents. The tremendous force usually associated with both industrial and automobile accidents results in extreme trauma to bones and soft parts, and more often than not, is the cause of a considerable degree of permanent disability of the joints affected.

Through personal liability insurance and compensation laws, many of these patients later become involved in litigation and this in turn not only prompts the investigation of the method of treatment, but also the result obtained. It is important, then, that we all understand and put into practice at least ordinary and practical mechanical principles of treatment.

In my experience, little help can be secured from textbooks on this particular subject. We must then turn to medical literature and case reports for information and practical help. With this thought in mind, I wish to review with you five cases of various types of fractures entering into the knee joint, hoping that you will be able to gain a few practical points in treatment which you could apply, should you be called upon to treat similar cases.

Case I. A male of average size, aged forty-three years, was struck on the inner side of the right leg by a portion of a gasoline barrel as a result of an explosion November 14, 1928. Emergency treatment consisted of support and simple traction with sand bags to immobilize the limb laterally. X-rays taken shortly after the accident (Figure 1) showed a severely comminuted fracture of the lower third of the femur with a wide separation of



Fig. 1
Case I

the two condyles. Fortunately, there was no break in the skin. I first saw this patient eleven days after the accident. At that time much of the swelling and shock had been overcome. It was decided that skeletal traction, using the Pearsol type of ice tongs would be the most logical and simple method of maintaining leg length and at the same time forcing the two widely separated condyles into



Fig. 2
Case I

apposition. A Thomas splint, with an attachment permitting knee flexion, was used for support and the tongs applied with fifteen pounds of weight attached (Fig. 2). This traction was continued until January 10, 1929, when a long plaster spica was applied. On February 25, 1929, or just three months after the skeletal traction was begun, a walking brace was applied. At that time there was only 40 degrees of motion in the knee joint. Heat and massage were advised to increase knee motion.

This man returned to work fourteen months after his accident and was re-examined for determination of permanent disability on June 6, 1930. At that time he had right angle flexion and complete extension of the injured knee joint. There



Fig. 3 Fig. 4
Case I

was good alignment of the leg and no shortening. This patient could run, go up and down a ladder without difficulty, and the case was settled before the Industrial Commissioner on the basis of actual time lost, no permanent disability being allowed. (Figures 3 and 4 show x-rays of the knee taken June 6, 1930.)

Case II. Mrs. R., aged fifty years, fell when a rug skidded with her on a highly polished floor, causing a comminuted fracture of the lower end of the right femur. The lower end of the upper fragment was driven downward, forcing the condyles of the femur apart (Fig. 5). This patient was

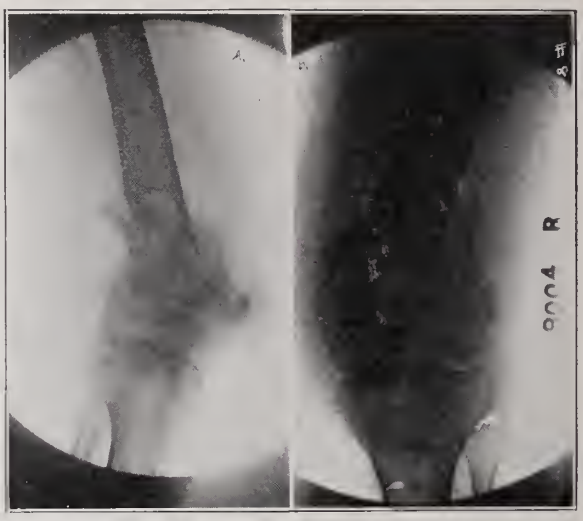


Fig. 5 Fig. 5 and 6B
Case II Case II

seen the day after the accident and one day later an attempt was made to apply skeletal traction, hoping that the tongs could be relied upon to approximate the separated condyles and at the same time, through traction, release the impacted shaft. Unfortunately, when an attempt was made to insert the point of the tongs into the inner condyle, it fell into a fracture line, preventing its fixation into the bone. Defeated in this type of treatment, we applied a Sinclair glue skate to the foot and ankle, attached twenty pounds of weight and supported the limb in a Thomas splint suspended from the overhead structure of a Balkan frame. Figure 6 shows in detail the type of Sinclair skate used. Three weeks later a plaster model was taken for a walking knee brace with pelvic ring attached and a long plaster spica was then applied. Physio-

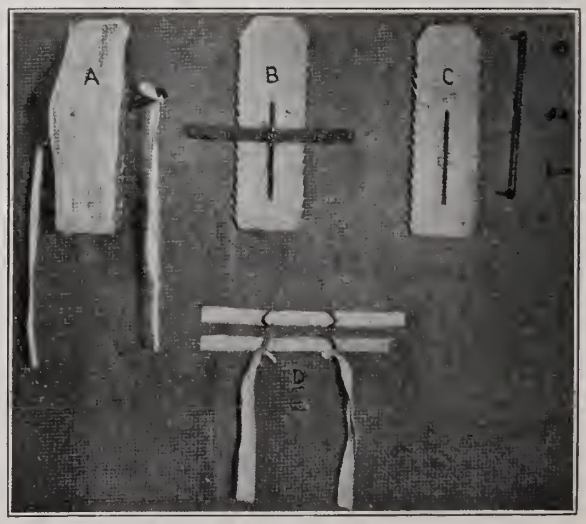


Fig. 6

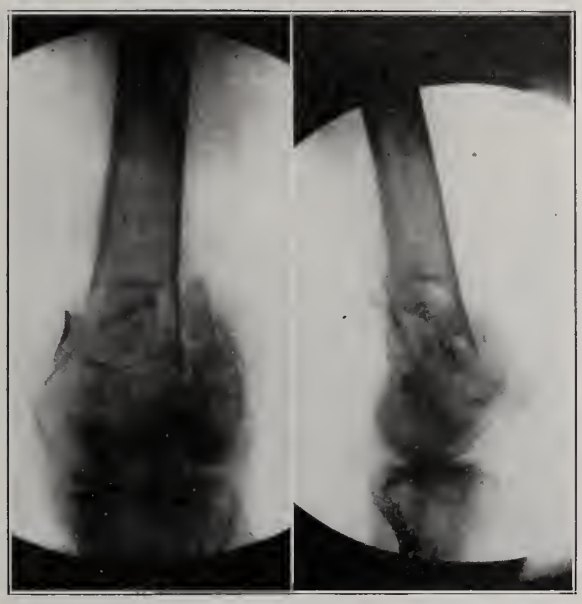


Fig. 7
Case II

Fig. 8
Case II

therapy was started to encourage knee joint motion. The brace was worn for four months and weight bearing was permitted only during the last month of this period. One year after the accident the patient had recovered with one-half inch of shortening and with flexion of the knee limited to a right angle. General alignment of the limb was good. This patient was able to do a small portion of her household duties six months after the accident and could get about very well after the tenth month. Figure 7 shows the x-rays of the end result with marked improvement of general alignment of the limb when compared to Figure 6B. Figure 8 shows the lateral view of this joint with a portion of the inner condyle still rotated forward, but well up and away from the weight bearing surface of the tibia. The displacement of the fragment caused surprisingly little interference with joint function. If it had been possible to use ice tong skeletal traction in this case, I am reasonably certain we would have secured much better reapproximation of the fragments, and perhaps still better function.

Case III. Mrs. B., aged thirty-six, weighed 247 pounds. On October 5, 1929, this patient was struck on the left thigh by a passing automobile. She was whirled about and fell, crumpling the right knee underneath her. Figure 9 shows the type of fracture resulting from this accident. On the second day her physician applied a cast extending from the toes to the groin. X-rays taken after this attempt at reduction showed improved, but not satisfactory position of the fragments. Therefore, on October 25, 1929, three weeks after the accident, the patient was placed on a Hawley traction table, both limbs fixed by traction and for twenty minutes the traction on the injured side was gradually, but markedly increased. During this time the knee was rocked from side to side to dislodge and loosen the impacted fragment and then a padded, heavy wooden mallet was used in an attempt to drive the widened upper end of the tibia into position. A long plaster spica was applied. The traction was not released until the cast was well molded about the groin, knee and ankle. Four weeks later this cast was removed and a walking knee brace applied. Weight bearing, however, was not permitted until twelve weeks after the accident. This patient was last examined May 7, 1930, at which time she was able to walk very well with the aid of a cane. She had a little more than right angle flexion and full extension of the knee joint. The alignment and lateral stability of the knee was good. Compare the general alignment in Figure 10 with that in Figure 9.

Case IV. Mr. H., aged fifty-four, weighed 162 pounds. On April 16, 1930, as the result of being struck on the outer side of the left leg by a passing automobile, this patient sustained a compression fracture of the outer portion of the upper end of the tibia (Fig. 11). The rather small fragment of bone was displaced sharply downward and outward. The next day an attempt was made to manipulate this fragment into position. After failing in this effort, an open reduction was done. Upon exposing the outer half of the knee joint through an anterior incision, the external semilunar cartilage was found to be torn and displaced downward between the fragments of the tibia. After this external semilunar cartilage had been removed,



Fig. 10
Case III



Fig. 11, Case IV

Fig. 9, Case III

the fragment of the tibia was easily levered into normal position and held there by a metal nail. A long plaster spica was then applied. The nail was removed when the cast was changed just prior to coming to this meeting. Figure 12 shows the fragment held in position by the metal nail. The interesting point in this case is the discovery of the fact that the torn and displaced external semilunar cartilage was the mechanical block effectively preventing reduction of the fragment by simple manipulation. No doubt, our inability to completely approximate the displaced fragment in the preceding case, as shown at A in Figure 11, could be explained on the same basis.

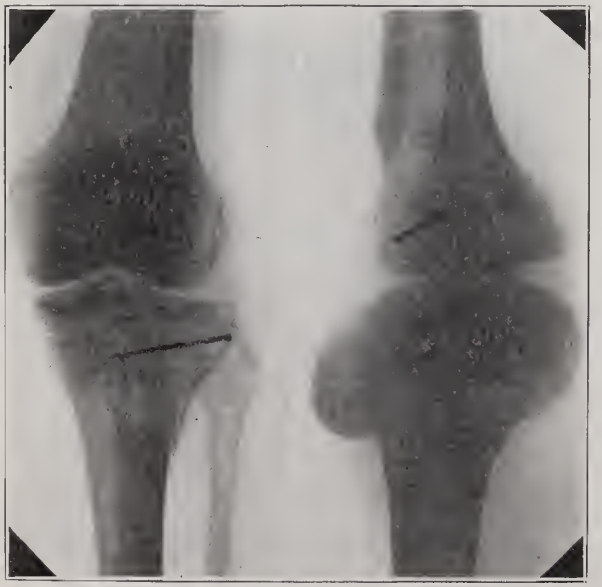


Fig. 12, Case IV

Case V. Mr. Q., aged twenty-nine, experienced a compression and comminuted fracture of the upper end of the tibia as a result of an automobile accident in August, 1928 (Fig. 13). This impaction was not broken up and the fragments united, causing sharp inward bowing of the leg just below the knee. When this patient was first seen on December 9, 1929, sixteen months after the accident, he was walking with the aid of a cane because of a weak and painful leg. Until that time he had



Fig. 13
Case V

been unable to return to his former employment, which was that of a salesman. The deformity was corrected by open osteotomy, forcing a chisel along the old line of fracture and breaking up the bony union. A long plaster spica was applied after the operation and worn for eight weeks. This was followed by a walking knee brace for one month. Figure 14 shows an x-ray of the limb in a cast shortly after the operation with the normal alignment of the limb restored. On February 11, 1930, this patient returned to his home in Chicago and was referred for follow-up physiotherapy treatment. He returned to work on February 26, 1930.

Time does not permit a review of all of the points of interest which could be brought out from a detailed study of these five cases, therefore, we must be content to make the following observations:

1. Comminuted fractures into the knee joint are serious, because of the possibility of a high percentage of permanent disability unless unusual care is taken during the treatment to secure and maintain normal length and alignment of the limb.

2. Because of slow healing, the joints must be protected from weight bearing for ten to sixteen weeks.



Fig. 14
Case V

3. We may usually expect flexion of the knee to be limited, perhaps stopping at a right angle in the more serious cases.

4. In compensation cases we must give a guarded prognosis, allowing six to twelve months for temporary total disability, and remembering that since it is often mechanically impossible to effect a perfect reduction of all of the fragments, a mechanically imperfect joint, obviously, is the end result. Such a joint is certain to wear out long before its fellow.

5. Mechanically imperfect joints, plus chronic foci of infection elsewhere in the body, not infrequently develop into chronic osteo-arthritic joints. Under such circumstances permanent incapacity for ordinary manual labor results.

III

FRACTURES OF THE HIP

Fred L. Knowles, M.D., Fort Dodge

When Dr. Myers asked me to say a few words about fractures of the neck of the femur, he asked that I emphasize especially the bad results. That certainly applies to fractures of the neck of the femur. There is no fracture, I believe, that causes not only the orthopedic surgeon and the general surgeon, but the general practitioner, more trouble and more grief than a fracture of the neck of the femur. Therefore, I have chosen today to summarize the treatment of these fractures rather than to give you detailed descriptions of individual cases.

First, I want to emphasize the difference between extracapsular and intracapsular fractures, with regard to the results obtained. I had a great deal of difficulty in finding definite, specific percentages of results in the different types of treatment.

In explaining an extracapsular fracture I want to say that, as a rule, fractures of almost the entire neck of the femur are intracapsular. If you take the head of the femur with the neck, the capsule attaches close to the intertrochanteric line and extends upward almost to the base of the head on both the upper and lower surfaces. The blood supply enters the neck close to the head, so that any fracture involving the capsule is very apt to cut off the blood supply which travels upward in the capsule.

The extracapsular fracture occurring close to the trochanters is one that gives us very little trouble as far as absorption or non-union is concerned. That, of course, is due, as you all know, to the cancellous bone at that point and the fact that the blood supply is adequate.

In x-raying fractures of this type, I think the best results are obtained by using stereoscopic x-ray films. We have very many cases of malunion at this point and practically none of non-union. The malunion occurs from impaction, where a portion is impacted into the head, either on the posterior or anterior side, giving very sharp angulation of the neck into the upper end of the shaft. This type of impaction should always be released before traction is applied. Personally I believe that the best results are obtained by traction, with either a Hodgkin's or Thomas's splint.

The only definite reports, on a long series of cases of *intracapsular* fractures which we were able to obtain, came from a large hospital in Berlin. The first series of 169 cases using traction gave a death rate of 31, or *18 per cent.* The good results, using traction or a number of the ordinary methods of treating fractures of the neck of the femur, were only 19, or 11 per cent.

In the same clinic, at practically the same time, there were 176 fractures where the Whitman cast was used which gives us a large enough number so that we have a comparatively good idea as to results. There were 11 deaths, or only 6 per cent. The cast used was the Whitman cast, either single or double, with 45 degrees abduction, or 90 between the legs on the double spica. There were 118 good results, or 67 per cent. If

we remember nothing else from this talk I hope we will remember that distinction. Every series of results that you classify will give you a different percentage. Many of us have too small a series to have a definite idea as to the relative merits of the two systems. This, I believe, gives us a fairly good idea of the actual comparison, 67 per cent good results with cast treatment as against 11 per cent good results with traction.

The cast treatment gives a great deal more immobilization in the double spica. The main point in the use of the single spica then, is greater comfort, because the patient has the use of his other leg, he can put the foot up close to the buttocks and raise himself onto the bed-pan or he can be flopped over with the cast in the air and turned back and forth in bed, thus preventing any possibility of bed-sores, and reducing the percentage of pneumonias in elderly patients. For that reason, the mortality in the single spica, I think, is less than in the double spica. The mortality with the cast treatment, of course, is materially lower than with extension, when the patient is apt to develop pneumonia and bed-sores, the two main causes of death in these cases.

In the double spica we have greater fixation with a consequent lower percentage of non-union. The legs are at an angle of 90 degrees and keep the fragments in better position, and the end results, if the patient lives, I think are better. However, I have found that elderly patients put into a double spica lose weight very rapidly. I have also found that even very old patients in a single spica have gained weight, and very few of them have lost weight. That is because they are permitted enough motion to retain much of their vitality.

It may be necessary to x-ray these fractures oftener than once a month early in this condition, but after the first few weeks they should be x-rayed at least every month to get a definite check on the two things which produce bad results in fractures of the femur.

Another thing that I think is important is to keep the knee flexed when you put the leg in a cast. Very often you see a cast put on a perfectly straight knee, with a severe strain on the posterior ligaments of the knee which is very painful and will keep the patient awake. I believe that it is a good thing to put a hinge on both sides of the knee, and incorporate it in the cast at the end of two months. By that time there will be some callus formation, and the knee can stand flexion. This is especially valuable in elderly patients and those who have a tendency to develop arthritis. If a patient is left in a cast for a long period of time there is a tendency to develop ostearthritis, which will produce a permanently stiff knee unless hinges are incorporated in the cast.

The position of the ankle is important. Motion should be retained in the ankle-joint. As a rule, we have more trouble with the knees and the ankles after the union of the hip than we do of the hip itself. I think it is important to keep the cast on for five to six months, or until the callus has definitely healed. Permitting the patient to walk with soft callus is the cause of a good deal of the shortening that we have.

Therefore, summarizing briefly, the bad results of fractures of the neck of the femur can be attributed to two causes; first, absorption of the neck of the femur, and, second, definite non-union. I do not believe that with careful treatment we should consider shortening one of the necessary evils of fractures of the neck of the femur.

Absorption of the neck of the femur is due primarily to disturbance of the blood supply and lack of nutrition of the fragments. Therefore, we should x-ray the fracture every month so as to watch the progress of absorption.

I have one case of a man ninety-four years of age at the time of an impacted fracture of the neck. The entire neck was absorbed and there was nothing but the half-round head of the femur, plastered onto the trochanter with only three-eighths inch shortening, but the entire neck was gone. I do not believe that that can be prevented. Keep the cast on until you get union. There is one thing that is often overlooked, and that is the fact that impactions absorb in from five to seven weeks.

In non-union of the hip, we again should x-ray every month. The non-union should appear definitely on the x-ray plate by the end of the third month. We always get absorption along the line of fracture, and it should not be mistaken for a definite non-union. At the present time there is the use of the bone peg that I think is of advantage in treating these non-unions and should be instituted as soon as the non-union is evident. Whether or not a bone peg should be used depends definitely on the individual patient. The joint should be opened, the neck and head of the femur exposed. If the head is dead it should be removed. If the head is pliable and union seems possible, I think the bone peg should be inserted from the greater trochanter up into the head. In that way there is less disturbance of the blood supply than when the head is everted and the bone peg inserted in the head down into the neck, and I believe results are better.

The technic of beef-bone pegging consists, briefly, in using a beef-bone peg three-eights of an inch long. There is a great deal of discussion as to whether a beef-bone peg or an autogenous peg

should be used. The consensus of opinion is that the autogenous peg is absorbed and is only a skeletal support. I believe that will briefly cover some of the main points in generalizing the type of treatment we should use in these most serious cases.

IV

FRACTURES OF THE HAND AND WRIST

John A. Cahill, M.D., Volga City

For your consideration I have selected the two most common fractures, Colles' fracture and fracture of the scaphoid and semilunar bones.

Colles' fracture may be defined as a fracture of the lower one inch of the radius, and it might be called Ford's fracture, because the backward kick of Elizabeth, the old model T Ford, is often the etiologic factor, and since Henry Ford is anxious to aid suffering humanity, why not give him more publicity?

In the definition of a Colles' fracture I should like to take into consideration Type I and Type II, as suggested by Dr. Moorhead of New York City, Type I with displacement and Type II without displacement.

In a series of one hundred cases which I had an opportunity to study a few months ago, we found the following incidents: that 53 cases of the 100 were in males and 47 were in females; that 83 per cent of the patients were of the working class, between the ages of sixteen and fifty. In the occupations given, 34 were housewives, 11 chauffeurs, 11 clerks and 20 laborers.

The location and violence of the fracture may be considered. In this series 59 were found to be of the right radius and the balance of the left. The ulnar styloid was fractured in 52 of the cases. Nearly 90 of the fractures were due to indirect violence, and 78 occurred as Type I and the balance as Type II. The duration of the condition was from two days to three weeks.

The treatment seems to me to be the most important consideration in Colles' fracture. As physicians every one of us has seen this type of fracture. I believe it is one of the most abused fractures that we are called upon to treat, whether due to the timidity of the physician, or whether he is too easily satisfied with only fair results.

Treatment must, of course, be considered under three heads, reduction, retention, and restoration. The proper anesthesia must be chosen. Many men are beginning to use local anesthesia, as suggested by Dr. Buhler of Vienna. In my own experience I have had a few cases in which I liked it very much, but I feel more at home with the general anesthetic, and in these cases, the anesthesia of choice is a light anesthesia, if possible. Many times the fracture can be reduced without anesthesia.

Just a few words as to reduction. The method in vogue, as suggested by Dr. Moorhead and many others, is simply grasping the hand of the fractured member and breaking up the impaction. In doing this, traction is applied and pressure is brought to bear over the deformity. The reduction is complete when (a) elicitation of crepitus is observed; (b) a line drawn down the midarm bisects the middle finger; (c) the mass or deformity is gone.

After the reduction, the most important thing is retention. I might call your attention to the ordinary dorsal or palmar splints, whichever you wish, of basswood. I like the Johnson & Johnson plaster of paris splint. It is easily put up and you can fit the arm. If the patient is conscious, have him grasp the bandage, and then mold it sufficiently to fit the arm, the length being taken into consideration. Care must be taken not to put this bandage on too tightly, bearing in mind that Volkmann's contracture may occur.

I believe that many of us neglect the important factor of restoration. After we think the bone is in correct alignment, I believe we neglect the after-treatment. At the end of the second or third day it might be well to remove the splint and begin massage and light movements. Have your patient begin exercising the fingers at once. At the end of the fourth or fifth day discard the anterior splint, allowing the posterior or palmar to remain, and at the end of ten days begin light motion, active and passive, diathermy, if possible, with baking and general physiotherapy. I think this is one of the most important parts of the after-treatment of this simple and most abused fracture.

I shall now present the two important fractures of the wrist joint, those of the carpal bones. Those of you who have seen fractures of the semilunar, dislocated semilunar and scaphoid bones know you are dealing with a condition that is almost a complete disability. The patient is crippled in such a way that the hand is almost useless.

The anatomy of the bones of the wrist or the carpus is of interest. They consist mostly of cancellous bone surrounded by a compact layer. According to Dr. Speed, the blood supply is poorer in the wrist joint than in any joint in the system. The wrist joint, as you know, is of condyloid articulation, the bones consisting of the lower end of the radius, the scaphoid, semilunar and sometimes the cuneiform bone.

The cause of injury may be similar to that producing Colles' fracture, such as falling from a distance on the outstretched hand. If the lower end of the radius does not give, something must, and the result is a fracture of the scaphoid or

semilunar bone, with or without dislocation, and also a rent in the capsular ligament.

In describing the articulation, we know that the scaphoid fits in the cavity of the radius. The os magnum also fits snugly; likewise the semilunar on its lateral aspect. It is not necessary to go into that at this time.

According to Dr. Destob, the semilunar cartilage is hardly ever dislocated without fracture of the scaphoid. There is more or less agreement with regard to union; osseous union is the exception and fibrous union is the rule, according to authorities, notably Dr. Speed. He also states that there is a condition in the carpal bone after fracture similar to that which we find in the vertebrae, Kümmell's disease, softening and absorption, which leaves a residue in the cavity and cripples the joint. Dr. Ritter of New York, whose series I have had the opportunity to view and study with him, claims further that there is more or less of a contusion of soft parts. The force and violence must sufficiently injure the soft structures about the wrist.

Again quoting Dr. Destob, "a mobile, painful joint is not as good as a good ankylosis." Dr. Speed states that a fracture of the semilunar and scaphoid bones occurs once in twenty times as compared with a fracture of the lower end of the radius. Some, including Hearst, Marshall and Todd, disagree with that ratio. In this series there were found 150 cases of fracture of the scaphoid and 85 fractures of the semilunar. The signs and symptoms are as elsewhere in the body, painful joints, loss of function, swelling in the wrist and limitation of motion.

In the scaphoid fractures, pain is greater when the hand is in dorsal or radial flexion. Jamming of the thumb is also painful in fractures of the scaphoid. Both wrists should be x-rayed in the detection of this important injury. In semilunar dislocation, disability is almost complete. The fingers are flexed, and cannot be extended. The hand is very crippled. The treatment of fracture of the scaphoid resolves itself into the non-operative and operative. When there is no displacement, as in Type II, a cock-up splint is used after reduction is accomplished.

With Type I there should be steady traction on the fingers, with the hand in the palmar flexion. Pressure is made upon the displaced fragment to find its normal position. Should this fail, removal of the offending bone is required. The German surgeons are more apt to remove the entire bone, while some of the American surgeons remove only the fragment.

Immobilization should be carried out for a period of six weeks. Massage should begin early and the joint encouraged to resume its natural function.

The exposure of the scaphoid is another important part of the operative treatment. This is done by means of an incision on the dorsal of the hand over the summit of the radius, between the grooves of the extensor longus pollicis and extensor indicis, including an inch on each side of the articulation. Care should be taken not to remove a bone that is not the cause of the trouble.

In the treatment of dislocation of the semilunar bone, the closed reduction should be attempted; in the event it cannot be done, the bone is removed entirely, the incision, of course, being made on the palmar surface. If the gap is sufficient between the radial articulation and the carpus, the bone will slide into its place after forcible manipulation of the wrist.

In the after-treatment I again might state that the most important factors are massage, baking and physiotherapy. I cannot stress those points too strongly because we have neglected them in the past. In the future, I think, if we take those things into consideration, our results will be much happier than they have been in the past.

In conclusion, the scaphoid is damaged more often than any of the carpal bones. Dislocation of the semilunar bone is almost apparent with fracture of the scaphoid bone. Osseous union is the exception; fibrous union is the rule. Early attempt at closed reduction of scaphoid and semilunar fracture should be attempted before open operation. Failure to obtain reduction calls for open operation.

Both wrists should be x-rayed and compared with the diagnosis, but physical findings must be your guide.

V

FRACTURES OF THE SHOULDER

CHARLES A. KATHERMAN, M.D., Sioux City

I have two things I will promise you. First, the hammer will not have to fall, and second, there will be a few rather strong assertions made about methods of treatment of shoulder fractures which I do not believe are being carried out today.

It is not surprising that following grand opera there is need of a ballet. We have had here today a symposium on fractures. An immense amount of work has been put on these papers. Yet it has appealed to me that the symposium has been presented so rapidly that we perhaps are not getting out of it as much as we should, and that is no criticism of those who have preceded me. On the other hand, following me is Dr. Hopkins of Chicago, and, quoting an old Scotch surgeon by the name of MacEwen, "When the nightingale

sings, the rest of the birds should keep still, lest their feeble notes disturb the echo of his song."

In general, fractures of the shoulder or near the shoulder are serious. Most of them, however, heal very well. The ones which do not heal well are those with luxation, that is, partial dislocation. I am not going to go into fractures of the scapula or clavicle. What little I have to say will concern the upper end of the humerus.

There are only two or three fractures that we need to consider; first, fracture of the anatomic need to consider; first, fracture of the anatomical neck of the humerus, the rounded portion; second, fracture of the surgical neck, two or three inches below the joint, and, last of all, a consideration of old fractures.

These fracture luxations, where there is some dislocation in addition to the fracture, are not very easily treated, and they often come to operation. The others should very rarely come to operation. The necessity for operation on the luxation type, as you well know, is due to a short fragment which is dislocated, with no possibility of grasping it adequately and getting it back into position.

The two points I wish to emphasize are these: First of all, there must be a reasonable amount of the head of the bone in contact with the glenoid cavity. Whatever else the skiagram shows may not be so important. If there is a luxation it will have to be operated unless such contact exists.

The next thing that I consider of very distinct importance is the matter of abduction. We have all seen fractures of the shoulder treated with Middledorf's triangle, some surgeons hanging one thing on the elbow and some another, in an attempt, as it were, to draw out the lower fragment of the humerus. I do not believe that method of treatment can be justified today. The difficulty in treating fractures of the head of the humerus is due to the fact that the head of the bone will not go underneath the acromion. If you do not get the head of the bone so that it will slip in underneath the acromion, your result will surely be unsatisfactory. If the head of the bone can be held underneath the acromion four or five days, abduction will cause no difficulty.

I merely wish to repeat that the fracture luxations do not do very well. Fractures of the anatomic neck occur in women, usually with impaction, when the bone is soft. Fractures of the anatomical neck do well if we forget the shape of the head of the bone and get a fair amount of surface in contact with the cartilage cup of the glenoid and sufficient clearance under the acromion for the head to swing in under. New factors, of course, are involved when the surgical neck is broken off. We have the pull of the muscles, the external rotators being the infraspinatus and the supraspinatus, and the internal being the pectoralis major and the pectoralis minor.

Naturally, in that type of fracture the upper fragment is frequently badly out of line with the lower fragment, the muscle tension factor coming in. Again, if one can get reduction that gives normal or nearly normal abduction out from the body, and external rotation, the rest will take care of itself.

I might say a little about fractures of the glenoid cavity. It was my experience several years ago to have two or three in succession. The glenoid cavity of the scapula was driven back a good inch toward the chest wall, from the appearance of x-ray films in stereopticon pictures, and in one particularly bad case, I thought it should be pulled out. However, I had nothing to pull on. After a week or ten days had gone by and I had not been able to get the glenoid fossa pulled out by any means of traction, I thought I should do an open operation. I took off the edge of the acromion. By the way, a fine approach to the joint can be secured by sawing through the edge of the acromion. I turned down the deltoid and thought by means of ice tongs I could get hold of the glenoid cavity and pull it out, but I had no success. In fact, I do not believe I pulled anything out, although I worked for quite a while. That man obtained as perfect a result as one could ever get. Fortunately, there was no infection, even after a great deal of operative trauma.

The next case I left alone and it did just as well. I had several confreres in Sioux City, and they had heard of my experience, and they left similar cases alone. The thing I should like to impress upon you is this: it took us a long time to find out that Whitman wanted to carry the limb out in extreme abduction for fracture of the neck of the femur. Why? Because in that position the femur shaft must necessarily be in contact with the head or as nearly in contact as we can make it, since the acetabulum will hold it from above. It took us a long time to learn that acute flexion is the standard treatment in types of elbow fracture. If you succeed in reducing the fracture at all, then leave it alone.

I do not believe we have yet come to the place where we are treating fractures of the surgical neck of the humerus (and that is the thing I am trying to emphasize) in a Thomas's splint by abduction. The head of the humerus will clear underneath the acromion, and there will be none of the unnecessary and injurious dragging at the elbow. We used to hear a lot about circumflex palsy, paralysis of the deltoid, and the involvement of the circumflex nerve in the callus. That

usually takes place a little lower. Certainly, we were all nurtured on that kind of teaching. I have seen many fractures in twenty years of practice, and I have seen very few that I considered damaging to the circumflex nerve. This is usually caused by the pulling down of a heavy, swollen arm in an attempt to pull down the lower fragment. I do not know who it was that called attention many years ago to the fact that you probably dislocate the upper fragment by the weight of the arm itself and by any traction you might attempt to put on it.

VI

HEAD INJURIES, DIFFERENTIAL DIAGNOSIS AND TREATMENT

CLARENCE W. HOPKINS, M.D., Chicago

The array of talent that has just preceded me has been most excellent and the subjects most interesting, any one of which would take an hour to review and to discuss because there are so many, many things that could be brought out about all of these fractures.

When I left Chicago I brought along something as a life preserver that is not going to touch upon any of these fractures. I think it would be rather presumptuous on my part to try to reiterate and emphasize what these learned men have already said and have so well presented to you. What I would have to say about them would be merely a repetition.

Therefore, I brought along some material and slides that have been of the utmost importance to all of us in industrial and traumatic surgery, particularly in the railroad industry, and that is the matter of "Head Injuries." You had an excellent clinic this morning on hydration and dehydration of the brain by Dr. Fay. You will probably have something on the same subject tomorrow. What I am going to give you now will be entirely different from what you have already had and pertains to "Head Injuries."

It might interest you to know that in the year 1929 there were 31,600 deaths from various kinds of automobile accidents; from trying to beat railroad trains and disputing the right-of-way, in which the train always wins, as you know, or going off the right-of-way, or by collisions, or upsetting, or various other types of accident. For every one of those 31,600 persons who were killed, 100 were injured. There were 3,160,000 people injured by automobiles, and 10 per cent of that number sustained head injuries. Just imagine the problem we as surgeons have before us because every one of us, no matter where we are located, in a large or small city, or in a crossroads village, may be driving our own cars along the road, and may encounter one of those collisions or bad accidents, as I myself have done.

The subject is an extensive one, and we should be prepared to care for these cases, because every one of us, no matter what his specialty, should at least be able to give first aid. I do not believe the practice of any of us is as highly specialized as that of the fellow I heard of the other day who was called to treat a man who broke his right leg. He said, "I am sorry, I specialize in the left leg." Therefore, I think we all should have a certain knowledge of first aid in these head injuries to treat these severely injured persons on the highways and on crossings and in small towns, no matter where they are, who are so badly neglected and often lose their lives, because they have not received proper first care.

For many years we did nothing, trusting to God to bring the patients through, and sometimes God was busy somewhere else and the patient did not recover. Then we were going to do wonderful work in subtemporal drainage of the skull, but we got into more or less ill repute by doing the subtemporal operation and getting no results. Why? Because, in the first place, many times we did not make the correct diagnosis. We did not know where the injury lay. We operated on one side and at postmortem found the injury to the brain on the opposite side; in other words, these were cases of distal explosion of the brain substance or blood vessel itself. After it was too late, and the patient was ready to be buried, we found we had made a mistake. That is why I have chosen this subject today rather than to try to go over all of the fine papers you have just heard.

We have all had patients brought to us who had been struck by a railroad train or had been in an automobile collision, who were barely breathing, and either totally or partially unconscious. We would watch and wait and see what was going to take place, in the meantime doing practically nothing for them.

It is up to us to find out early what is taking place and not wait until we find a choked disk, because when a choked disk occurs it is too late. I am going to bring out a few points on the matter of diagnosis and treatment and slightly touch upon dehydration, which I do not believe will trespass upon Dr. Fay's paper or his clinic.

For many years we talked about contracoup. Then we got away from that thought, but I will tell you from experience that there is such a thing as contracoup. Some of the worst brain injuries I have ever had to take care of have been on the opposite side from the trauma or skull fracture.

The great tendency is to operate upon the side where the obvious injury took place, or the gross injury as you see it. Many times the operation is not successful, as I said before. Find out where the injury is. I do not mean in a case of compound fracture of the skull, with brain and blood oozing out so that you can see it and know the site of injury. I am speaking of the obscure case in which you do not know the exact site of injury.

Of course, in all cases of gross depressed fracture of the skull there should be an operation for the raising of the fragment. That is obvious, for the reason that callus and depressed fragments may ultimately, in later years, cause a brain abscess or epilepsy. I had a case sometime ago, which after three years developed a brain abscess and resulted in death.

The few symptoms I am going to point out are not the obvious ones but are those which we should observe and watch for when the site of injury is uncertain. We have many patients come to us, who are injured about the head, especially in industry. They complain of headache and dizziness. Sometimes a patient will say that he sees double, he is nervous and cannot sleep. For a long time I thought a lot of those fellows, especially the Southern European laborers (who, of course, we know represent a difficult problem), were fakers, but I have since changed my mind. I found that a great many of those men were not fakers but had actually been injured and retained the symptoms over a long period of time and were telling the truth. We will touch on that later.

In the matter of opening the skull, in a case where, although there is a trauma, with underlying fracture, your symptoms do not quite correlate; in the first place, the man may be paralyzed on one side. He may have either a fixed or dilated pupil, or both. We open the skull and find nothing, and the patient gets worse and worse. The cases that I am trying to impress upon you today are those in which the symptoms are not correlated and you do not know just where the injury is located and where to enter the skull. I am not talking about the wet brain, of course, which we know affects the whole intracranial cavity contents, and which very quickly becomes hydrated and compressed. One of the most important symptoms that I look for, is the degree of temperature. In all obscure cases in which you do not know the location of the injury, the temperature should be taken in both axillae at the same time. Regardless of where your trauma is or where your linear fracture may show in your x-ray, the temperature on the side opposite the brain lesion will be from one-half to one and one-half or two degrees higher than on the other side. That has been one of the greatest helps in my work in skulls in over 350 cases in about four years that I have had directly under my own care or in consultation.

Another thing that we must look into is the matter of the fixed or dilated pupil. Our prognosis depends a great deal upon the fixed pupil or the dilated pupil, particularly if both pupils are affected. Where both pupils are widely dilated and remain so, the prognosis is grave, because the third nerve is injured, near the floor of the fourth ventricle. No fracture may be found in the skull, but that does not mean that there is no brain injury. Some of the worst cases I have had to deal with showed no fracture. We are all aware of the fact that in basal fracture, where all the clinical symptoms are present, bleeding from the ear, bleeding from the nose, vomiting of blood and subconjunctival hemorrhage, many times the x-ray will show you nothing, because the overlying bone in the different fossae has obscured the fracture, unless the vault of the skull is injured at the same time or the fracture extends into the vault.

When we get a patient who has been injured about the head, and we are quite sure there is no injury to the nose or face, that would cause bleeding, but he, nevertheless, bleeds from the nose, we can be sure that he has received a fracture somewhere in the skull. A subconjunctival hemorrhage is significant and pathognomonic of a fracture of the skull somewhere in the base, probably through the sphenoid or ethmoid cells. The vomiting of blood, many times early, with no other symptoms, will assure you that there is a fracture of the skull somewhere at the base or in the midline. If the patient has fallen on his head, the spine has been driven up, and the x-ray does not show that there has been separation through the midline, opening the pharynx. The blood trickles down, and the patient swallows it and then vomits it. That is significant of a skull fracture and brain injury.

Fracture of the base of the skull involving the middle ear is self evident, but how many times has the interne been told to have the ear irrigated, and the interne will in turn tell the nurse to irrigate the ear. She will take a glass syringe, about one ounce size, that will fit snugly into the ear, and use boric acid solution which we know is not always sterile, and force it under pressure into the ear. Where does it go? Through the rent in the membrane of the drum, into the middle ear and into the mastoid cells. One of the worst cases I had to take care of was brought about in just that way. We must leave those ears alone. We should swab them out carefully with a pledget of cotton on an applicator, sprinkle lightly some antiseptic

dusting powder into the ear and softly pack it with sterile cotton and leave it alone.

In the matter of first aid, many times these injured patients are taken to some farm house near the place of accident, a doctor is called and nothing is done until some arrangement is made to get the patient to a hospital in the nearest city. It is probably an hour, a half day or a whole day before any treatment is begun. If any of us are called on such a case, nearly every farm house, as you know, has Epsom salts or magnesium sulphate.

If you have nothing else to work with, the best thing to do if you find that the patient is semi-conscious, or unconscious, or developing intracranial pressure or wet brain, is to give a retention enema of four to six ounces of saturated solution of magnesium sulphate. It should be introduced and held in place by the hand so it will not be expelled, because it is more or less irritating, and the patient will expel it unless you do hold it. It is one of the quickest methods of dehydration and prevention of wet brain. As Dr. Fay has told you and will probably tell you tomorrow, another method we use in dehydration is the intravenous injection of glucose solution.

Several years ago I decided that a weak solution of glucose was not much more than a little sweetened water and would have the opposite of the desired effect upon the cells. From that time on, in all cases of shock, in head injuries and other conditions and following operations and postoperative shock, we have used 50 c.c. of 50 per cent solution of glucose, given intravenously very slowly. We do not use that made at the hospital or sterilized at the hospital. We insist upon having the glucose that is made by a standard manufacturer and put up in ampules which we know is absolutely sterile, because we know that many serious reactions are due to infected solutions.

Another method for quick dehydration is the introduction of 60 c.c. of saturated solution of common salt, 33⅓ per cent, taking about an hour to get it into the vein.

We have gotten away from the routine teaching of spinal puncture for the reason that I have seen so many bad results come from spinal puncture in the hands of those who do not do it very frequently. Many times the needle is too large. Nearly all of those needles are blunt. When the operator feels around for the canal, the needle tears the piamater and other layers lining the spinal canal, and there is a leaking of intraspinal fluid after the needle is withdrawn. The patient gets a headache, due to the withdrawal of too much intraspinal fluid and the sinking down of the brain, the medulla, into the foramen magnum which acts as a ball valve and chokes off the return circulation. The first thing you know, you may have a dead patient on your hands due to respiratory failure.

What I want to bring out more than anything else is the obscure case in which you are not sure of the location of the injury; regardless of where the blow has taken place, you have to consider the neurologic findings. Whether or not the patient is paralyzed on one side or the other, the reflexes must be taken into consideration. Of course, paralysis on one side, or the Babinski sign, will give some indication, plus the temperature of the two sides, which should be taken every fifteen to twenty minutes, instead of every two or three hours. I have been amazed to see the change that has taken place in fifteen minutes in a patient, by taking these two temperatures at the same time and at frequent intervals. I discovered the test accidentally and it shocked me. I did not believe the thermometers and tried it over again and kept at it until I found there was something to it and commenced to follow it up.

There is another thing we often overlook. I was surprised some time ago, when I was out with a physician to see a case in a distant city. The doctor said, "Take the blood pressure and see what it is. I wish you would stay here until tomorrow morning." Blood pressure taking should not be allowed to go all night. It should be checked every fifteen to twenty or thirty minutes and kept track of all night long by a nurse or an interne who is on the job every minute, because the most tremendous changes can take place in a short time in those cases where there are rapidly developing intracranial conditions.

On the side of the brain injury you will many times find the pulse pressure differing as much as 10 to 20 points higher than the opposite side. The eyes have to be watched carefully. The dilated pupil is on the side of the injury, unless both pupils are widely dilated and fixed, and then you know there is a generalized condition of wet brain.

I have often been surprised at the tremendous injuries to the skull that we can get, and at the same time have so little injury to the brain itself. I often wonder if the fracturing of the skull itself does not help to absorb the force and save the brain. I have found that the vast majority of severe cases, the bad cases, I have had to take care of, have been the ones where there was very little sign of fracture or I had to guess at it, or there was no fracture at all, showing rapidly developing wet brain. That is the type of case I am talking about when I say that we must try to make a correct diagnosis before we open the skull, and we should not, if we can help it, use a spinal needle. I use the spinal

needle only on rare occasions when there is a persistent headache, and that is my last resort. Its use is a bad thing to teach; some of you may not agree with me but my own experience has taught me that.

One of the greatest mistakes made is neglect of an involved frontal sinus. We fail to recognize the dark shadow which means probable infection of that sinus. In many of these cases you will find that the posterior wall of the frontal sinus has been opened, and is probably dirty, if there is a compound fracture. If a dry dressing is applied, and this is usually the case, the wound becomes sealed, and the line of least resistance is backward through the posterior wall. Then, quite suddenly and unexpectedly, the patient develops meningitis. I am paying careful attention to these cases, and keep free drainage for many days. I have found that metaphen put out by the Abbott laboratories is one of the best antiseptics available in this type of case. It is non-irritating and non-poisonous, and has brought remarkable results.

During recent years we have been getting, in industry, many patients with skull injuries, who were previously injured in the war. I had one patient who was struck on the side of the head by a signal post as he stuck his head out the cab window. He was taken to the hospital, bleeding from the ear. My assistant telephoned me and said the man was wholly conscious and not vomiting, and seemed to be in very good condition. I told him to leave the patient alone until morning and then get an x-ray. When I reached the hospital in the morning, the x-ray had been taken and the man was still conscious but oozing a little from the ear. I looked at the x-ray and wondered where the missing bone could be. It occurred to me that he had been hurt before. I examined him and found a scar. I asked, "When were you injured before?"

"I was hurt during the war."

"You were hurt in the war?"

"Sure, they took out a piece of bone and threw it away."

I asked him when he had been hurt before. If I had asked him if he were hurt before, he probably would have denied it. He had a basal fracture which finally healed. The ear-drum closed up and he got well and went back to work.

Many such patients who were injured during the war are now getting into industry and if we do not watch for them they will claim industrial injuries and cause us considerable trouble.

The point I wish to emphasize today, more than anything else, is the importance of finding out exactly where the injury is, irrespective of what the x-ray shows; to localize the brain injury and operate accordingly, rather than routinely open the side on which the fracture occurs.

Of course we know that treatment is a matter of management. I do not give these patients a high protein diet, since they are already absorbing a high degree of protein. We know that blood or serum or exudate of any kind outside its normal channel becomes a foreign protein. Absorption takes place, the temperature is elevated and the patient has the same reaction that he would get from a foreign protein injected under the skin or into a blood vessel.

Therefore, we keep these patients on a low protein diet, we keep their elimination high and keep them alkalinized. Above all things, instead of turning them over to an interne, we watch the patients ourselves very carefully, and see that all orders are carried out.

What I intended to say in the beginning, however, is that nearly all of these patients with head injuries develop a glycosuria and an outpouring of glycogen from the liver. In one experiment, by striking dogs a blow on the head, in different degrees and in different locations, we found that practically all of them developed either glycosuria or hyperglycemia. In the cases where we were in doubt we placed the dogs in the dog hospital and injected 1 c.c. of epinephrin. An injection of epinephrin in any patient who is normal and who does not have diabetes will raise the blood sugar and glycosuria, but if the urine is examined fifteen minutes, a half-hour, one hour, one and one-half hours and two hours later and at the end of three hours, in the normal subject, the glycosuria will level down. In the case where there is a real head injury, however, and the patient complains of symptoms, the glycosuria or hyperglycemia persists for days and days, or even weeks, and you can make up your mind that that man has something inside his skull that is causing trouble, and he is not a malingerer.

I wish we could go further with this because there is so much to it and it is such an interesting subject. However, I hope these few little points will be of some benefit to you as well as to myself and will help us in the future, especially in cases of automobile or other accidents involving the head.

SMALLPOX IS INCREASING

The Public Health Service stated on November 8, that year after year, there are more cases of smallpox reported in the United States than in any other country of the world except British India, despite the fact that the disease may be

controlled by vaccination and revaccination, and by cooperation it could be stamped out in a few years. During the first ten months of 1930, it was stated that about 40,700 cases of smallpox were reported in the United States as compared with approximately 28,000 for the corresponding interval of the previous year.

POSTMORTEM EXAMINATIONS; THEIR IMPORTANCE AND NECESSITY*

F. P. McNAMARA, M.D., Dubuque
The Finley Hospital Laboratory of Pathology

Efficient medical care demands correct diagnosis. Every true physician aims to increase his diagnostic ability. Today we arrive at a diagnosis by sifting the evidence obtained from an exhaustive clinical history; by making a searching physical examination and such special examinations as are indicated. We judge our accuracy by the results obtained. When the patient gets well we may assume that our judgment was correct, never forgetting that nature may have helped, even if our deductions were wrong. If the patient dies, as a million and a half do annually in this country, we may be content to speculate that our diagnosis was correct or, if we have a truly scientific attitude towards our profession, we will want to make a postmortem examination, and to know all the facts. The latter is the final check on all clinical investigations and our diagnostic ability. Medical authorities (Winternitz[1], Mills[2], Hektoen[3], and others) recognize the percentage of deaths that come to necropsy as an index of professional efficiency whether concerned with medical education or medical practice. The realization of this fact has stimulated our medical schools and some of the metropolitan hospitals to increase the number of necropsies. For all practical purposes this means of advancing medical knowledge has been neglected in the smaller hospitals and in private practice. The purpose of this paper is to emphasize the importance of and need for more postmortem examinations in the fifty to two hundred bed hospitals and in general practice as an available means of post-graduate education.

IMPORTANCE TO PHYSICIAN

The postmortem investigations are of value to the medical profession, the family, and the community. The physician is benefited because (1) the necropsy offers opportunities to review his anatomy and pathology; (2) the pathologic processes encountered may suggest some line of medical research; (3) the examination is an efficient check on diagnostic methods and therapeutic measures, and (4) the anatomic diagnosis completes a given case, thus tending to produce constructive criticism when considered in a clinicopathologic conference.

Review of Anatomy and Pathology. The review of anatomy and pathology is important to every physician. Without it, the facts of each grow hazy in our minds and as they are fundamental in clinical diagnosis, the value of an occasional "brushing up" is apparent. The necropsy gives visual instruction in the appearance of normal organs as well as in the minor or gross changes due to disease. On the completion of his course at medical school, the graduate has a working knowledge of physical diagnosis but without constant practice and some means of checking his findings, he never becomes expert in this important branch of the art of medicine. Probably the lack of accuracy in diagnosis is largely dependent upon our inability to detect physical signs or to interpret them properly. The correlation of the latter with the postmortem findings is a valuable method of improving our diagnostic skill and of developing medical judgment.

Development of a Museum. In previous papers [4 and 5] I have indicated how properly preserved pathologic specimens can be utilized to create a medical museum. Such a museum, with histologic slides, becomes a permanent source of instruction in gross and microscopic pathology. An enormous amount of material is wasted in the smaller hospitals because no one is interested enough to preserve it. The development of a museum is possible in every community. We have nearly five hundred specimens in our collection. They are utilized at hospital staff and county medical society meetings as well as in the education of our nurses. They are, with certain limitations, of educational value to the general public, in that they give some idea of the infinite variety of changes that occur in the body as the result of disease.

Stimulation to Research. Steinberg[6] has recently pointed out that the medical profession is becoming conscious that the efficient and scientific practice of medicine should not be restricted to university hospitals which constitute 316 out of 7,000 hospitals in this country. I am going a step further and state as my opinion that research should not be limited to university and metropolitan hospitals. There are some types of medical research that may well be carried on in the smaller hospitals and in private practice. In this connection we may remember the changes in our conceptions of heart disease incurred through the ante-

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mortem and postmortem studies of Sir James Mackenzie. He was not content merely to satisfy his patients but he had to satisfy his own scientific curiosity. What he, the ideal country practitioner, did in England can be done in this country Indeed the man practicing in the smaller communities has a distinct advantage in that his studies may often extend over the lifetime of his patient, as the population is more apt to be permanent than in the larger centers. It is essential, however, that his observations shall be detailed and exact. They will be complete only when the postmortem studies are finished.

Check on Clinical Diagnoses. Several investigators have published comparisons between clinical and postmortem diagnoses. Thus Cabot[7] reported the clinical diagnoses as partially or wholly wrong in 47 per cent of a series of 3,000 autopsies. Karsner[8] showed 8 per cent major error. Oertel[9] found only 22.3 per cent of the clinical diagnoses entirely correct. Moore[10] believes that more than 50 per cent of the clinical diagnoses are incorrect in the famous hospitals of Chicago. Cleland[11], in a series of 230 necropsies, found the clinical diagnosis correct in 53.5 per cent. In 29.5 per cent, the diagnoses were partly right but important lesions were mistinterpreted and in 16 per cent, no diagnoses or wrong diagnoses were made. It is significant that the findings in my series of 100 cases parallel those of Cleland. Correct diagnoses were found in 50 per cent; 28 per cent were partly correct but important lesions were missed, and in 22 per cent the clinical diagnoses were wrong or had not been made. In judging such figures it should be remembered that probably not more than one death in a hundred comes to necropsy, and as Karsner[12] has pointed out, it is doubtful if the percentage error is true for the general run of patients. If it were, our diagnoses would be little better than guesses. They do emphasize, however, that there is considerable error and in any scientific study of disease or of our diagnostic ability, the postmortem studies are necessary. Furthermore, they should stimulate us to overcome our deficiencies. We are all prone to point out errors but another function of the necropsy is to confirm clinical diagnoses. It cannot but be a source of pride to the clinician to have worked hard on a case and to have arrived at a solution of an exceedingly difficult diagnostic problem. Whenever possible, he will desire confirmation of his diagnosis and in fatal cases, this is possible only at necropsy. In my series, the causes of error were of two general types: (1) failure to make complete physical examinations; (2) failure to detect important lesions or misinterpretation of them. A few brief histories will describe some of the successes as well as the failures.

Case 1. The patient, a white woman aged sixty-four years, entered Finley Hospital in a semi-conscious condition, with paralysis of the left arm and leg which had come on suddenly. The feature of the past history which seemed most important was that her left breast had been removed for carcinoma fifteen years previously. This was followed by x-ray therapy. The present illness dated back four months when she had overworked following the death of a sister; she had attacks of gastric distress with vomiting following periods of excitement, fatigue or errors in diet. She complained frequently of a feeling in her throat as though there was a lump or something that should come up. The physical examination was largely negative except for paralysis of the left leg and arm. The systolic blood pressure was 115 mm. of mercury. A provisional diagnosis was made of brain hemorrhage on the right side. While that was the probable diagnosis, further study by the clinician caused him to suspect a brain tumor. The absence of blood in the spinal fluid, evidence of intracranial pressure on x-ray examination and changes in the eyegrounds, suggestive of a choked disc, tended to confirm his diagnosis. The question then arose as to whether it was primary or secondary to the breast carcinoma. The long period since the breast amputation and the freedom from all other evidences of metastases made it seem likely that it was primary. A decompression was done and showed the brain to be under considerable pressure but no tumor could be demonstrated. After a period of temporary relief the patient died and at necropsy a tumor 5 cm. in diameter occupied the region of the right internal capsula. Histologic studies showed it to be a spongioblastoma.

Case 2. The patient, a white man aged sixty, was treated at his home. He gave a history of chronic cough with some pain, a sense of tightness in his chest and shortness of breath. His symptoms had come on gradually and he was able to work up to eight weeks previous. Three weeks before examination six quarts of fluid were removed from his right chest in a Chicago hospital. Apparently a diagnosis of pleural effusion was made, as he was sent home in four days. When first examined, the right chest was found filled with fluid and 3,500 c.c. were removed. Subsequently, two aspirations of similar amounts of fluid were made at ten-day intervals. Each specimen of fluid was dark, reddish-brown and contained considerable blood. X-ray examination showed no definite evidence of tumor but the fluid obscured all details. However, because of the rapid recurrence of the effusion, its character, the localization in the right chest and the absence of evidences of cardiac or renal pathology, the clinical diagnosis was carcinoma of the right pleura. At necropsy 4,000 c.c. of fluid were found in the right chest and the compressed lung formed a small mass toward the midline. The entire pleura was thickened and nodular and a dense mass extended from the chest wall to the atelectatic lung.

No metastases were found in the other organs. The anatomic diagnosis was endothelioma of the pleura. Robertson[13] believes that all these tumors are secondary carcinomas but no other primary focus could be found in this case.

Case 3. A man sixty-seven years old was treated outside the hospital. He died in coma and the clinical diagnosis was chronic nephritis and uremia. The history was that about a year before death a cancer of the right heel was excised. It later recurred and a series of x-ray treatments was given. At necropsy there was a metastatic growth five cm. in diameter involving the right inguinal lymph nodes. He had smaller metastases over the right deltoid muscle and the lungs were studded with large and small growths. Undoubtedly he had brain metastases though we were not allowed to open the head. There was moderate arteriosclerosis of the kidneys.

Case 4. A man fifty-eight years of age entered the hospital with a complaint of pulmonary hemorrhages. Previous to admission he had been referred to a tuberculosis diagnostician. An x-ray examination of the lungs showed metastatic growths thought to be sarcoma and he was sent to the hospital. He died two days after admission. At necropsy, a large, hard mass resembling a hernial sac was noted on the left side of the scrotum. On dissection the testis was found to be the seat of a chorio-epithelioma. The lungs were riddled with metastases.

Case 5. Six months before death, a man of sixty years who was treated in his home, was thought to have had influenza and later the diagnosis was changed to pulmonary tuberculosis because of a rapid loss of weight and some evidence of consolidation of the left lung. No tubercle bacilli were found in the sputum. The anatomic diagnosis was primary carcinoma of the left lung. The growth had involved the pericardium and formed a layer around the heart.

Case 6. A man aged sixty-five had a collapse in his home after a short walk. It was thought that he had a stroke of paralysis and he was sent to the hospital four weeks before death. He gave a history of never having been well since an attack of influenza during an epidemic ten years before. His story indicated that he had had influenzal pneumonia. Since that time he had been subject to attacks of dyspnea and what was considered to be asthma. He had grown progressively weaker and gave up work five years before admission. A year later tonsillectomy was done at Iowa City. A year before death he was given injections in the hip for arthritis, but as they made him worse they were stopped. He was then told that his heart was in "bad shape." On admission to the hospital, the record of the physical examination stated that there was no evidence of consolidation in either lung but rather hyperresonance. Each lung was filled with moist rales, mostly expiratory. There was no paralysis of the arms or legs. The final clinical diagnosis was bronchial asthma, chronic myocarditis and arthritis. At necropsy the entire lung on each side was involved by a caseating, tuberculous process with cavitation.

Cases 7 and 8. Two men were operated upon and each was said to have an inoperable carcinoma of the stomach. They lived five and seven years respectively, after operation. In the first, the anatomic diagnosis was chronic nephritis and cardiac hypertrophy, generalized anasarca, thrombosis of right auricle and pulmonary infarcts. The second had a retroperitoneal liposarcoma. The stomach was normal in each case.

Case 9. A woman of forty-eight years came to the hospital with all the signs of lobar pneumonia of the left lung. She coughed up large amounts of blood-tinged, frothy serum and it was thought that it might be an influenzal type of pneumonia. The past history showed that twenty years before she had an attack of fever lasting six months which in New York was diagnosed as malaria. Twelve years later, while in Florida, she had a fever of 104° lasting ten days which was thought to be typhoid but no typhoid bacilli could be found in the blood or stools. Seven years later a diagnosis was made of fibrous tuberculosis (non-active) involving both upper lobes. She had been subject to asthmatic attacks for a number of years. At necropsy the diagnosis of lobar pneumonia was confirmed. The attacks thought to be malaria, typhoid and tuberculosis were explained by the condition found in the heart. The mitral cusps were thickened and bound together by scar and granulation tissues and the orifice was represented by a mere slit—a typical case of mitral stenosis with regurgitation.

COMMENT

The first two cases are examples of good medical judgment. The clinicians were not satisfied with what might have been thought the obvious diagnoses but considered all the possibilities and arrived at the correct solutions of the problems presented. In the first, the necropsy also disclosed multiple diverticula of the small intestine which evidently explained the gastric distress and illustrates one important function of the examination, that of explaining unexplained symptoms. The other cases are important if for no other reason than because they emphasize how a little more work on the part of the clinicians would have made correct diagnoses possible. The diagnoses in the third and fourth cases would have been clear if complete physical examinations had been made. The lesions were missed only because they were not looked for. In the fifth case x-ray examination would almost certainly have enabled the clinician to make a correct diagnosis. The sixth patient undoubtedly had had tuberculosis for many years. He was seen by at least six different men and the diagnosis missed by all of them because they were not thorough in their chest examination and because the sputum was not examined. The two cases in which the surgeons thought they saw inoperable carcinoma of the stomach are typical

of a not uncommon error. They emphasize the necessity of a knowledge of gross pathology. They also illustrate the need of the internist possessing an independent mind, otherwise he will be swayed by the opinion of the surgeon and will explain the symptoms in a given case by the latter's diagnosis, when a more probable one would be evident with a little unbiased study. The diagnosis in the last case, that of endocarditis, should have been apparent with anything like adequate study. It might be thought that such errors represent local conditions but the fact that several of the patients were studied in other cities and incorrectly diagnosed shows very definitely that such is not the case.

Clinicopathologic Conference: The consideration of deaths is an essential feature of hospital staff conferences. The aim is to improve the medical service through the suggestions of our fellow practitioners. If the cases are incomplete, the conference will fail in its main purpose because of insufficient evidence upon which to base constructive criticism. Therefore the clinicopathologic conference in which the clinical findings of completely studied cases are correlated with the necropsy data should be the basis of every staff meeting. This is a method by which every hospital, large or small, can continue the post-graduate training of its medical staff. Furthermore, as shown by Waite,[14] it can be utilized by small groups of physicians remote from hospitals if the members have a proper professional attitude and desire such improvement. The value obtained from the clinicopathologic conference is proportionate to the percentage of necropsies.

Importance to the Family

The family benefits because they learn the exact cause of death, not an inconsiderable factor, especially when there is any doubt. Such knowledge may aid in the settlement of insurance, estate or accident claims. Occasionally the postmortem studies bring to light some unsuspected disease, either hereditary or caused by the mode of living, and the information may be used in the prevention of similar conditions in the other members of the family. By accurately recording all the facts obtained we increase the value of every family history. The latter is a required part of a clinical record yet we pay little or no attention to it because of its unreliability. Few families know the cause of death of immediate members, let alone of their ancestors. In this connection, it may be well to point out that we know little concerning the hereditary factor in cancer. Maude Slye's work on mice[15] indicates that it develops as a simple mendelian recessive, but we have no means of evaluating the hereditary factor in human cancer. Warthin[16] has published a study of three generations of a family derived from a cancerous great-grandfather. Nearly one-third of the eighty-eight adult members developed cancer at a comparatively early age. Possibly heredity is more important than is usually supposed and if cancer is increasing, it is logical to expect that it will be of even greater importance in the future. Accurate family statistics are one means by which we shall be able to solve this problem as well as others concerned with heredity. Wells[17] has emphasized the need of necropsy studies to arrive at anything like accurate statistics concerning the frequency of cancer. He states, "These necropsy statistics show convincingly that at the present time (1923) we have no reliable statistics relative to the frequency of cancer as a cause of death. The futility of attempting to learn anything concerning heredity from such statistics is even more glaringly apparent. A single error in diagnosis may lead to entirely erroneous conclusions in the study of the influence of heredity on cancer in a given family."

Importance to the Community

The community benefits because of the improved medical practice that inevitably follows as the result of a high percentage of necropsies. The more necropsies, the greater the stimulus to improve methods of diagnosis and with improved diagnosis comes better treatment. Furthermore, the necropsy may bring to light some unsuspected infectious disease and will aid the health officer in preventing epidemics. The community also benefits because of more accurate vital statistics. If, as has been shown, there is a considerable error in clinical diagnoses, any conclusion drawn from statistics based on them are very apt to be erroneous. Too many death certificates have vague and some frankly wrong diagnoses. Doane,[18] who made a study of the value of mortality statistics, concluded —"One cannot help being impressed by the utter worthlessness of present-day (1922) civilian statistics." Time will not permit any lengthy discussion of this subject. I may say, however, that there should be supervision and analysis of the death certificates by one trained in medical diagnosis. To be effective, such supervision must be local and should have a physician or an especially trained layman in charge.

Need of More Necropsies

The small percentage of necropsies is a recognized weakness in American medicine. Wilson[19] reports that in 1929, thirty-five pathologists working in the medical schools and large hospitals of this country, performed 17,608 necropsies as compared with seventeen European pathologists who

did 34,865—nearly twice as many. Karsner[12] in 1927 was of the opinion that less than 0.7 per cent of the deaths in this country came to necropsy. Possibly there has been a slight increase during the past few years, as Caldwell[20] reports the percentage to be 24.1 in 2,717 hospitals of all classifications in 1930. I have been unable to obtain complete statistics for this state, and outside of the state university, which averages 53 per cent[21], I believe it will approximate one per cent. Most of the 100 bed hospitals run about 10 per cent and few necropsies are performed in private practice. Another indication for the need of more necropsies is the ruling of the American Medical Association that hospitals acceptable for the training of internes must have at least 15 per cent. In his original recommendation, Christian [22] felt that 25 per cent should be a minimum. In his paper he states, "While there may be exceptions as to hospitals with a smaller percentage of necropsies, I know of no exceptions as to desirability when the percentage is 25 or higher, and in general, the higher the percentage of necropsies, the more suitable is the hospital for an interneship. In my judgment, the hospital that has few necropsies is a hospital in which the staff lacks many qualities that go to make up the best type of medical man; often the staff lacks the courage to have a showdown of its diagnostic ability, a form of cowardice hardly consistent with the highest ethics and a real desire for progress. Most important is the fact that, without necropsies, the physician in charge of the case fails to realize his diagnostic deficiencies; he probably has ceased to progress in his medical knowledge and may even have retrogressed. There can be no poorer leader and teacher than he who no longer recognizes his limitations. In giving 25 per cent of fatal cases coming to necropsy as a criterion of desirability of a hospital for an interneship, I believe a very serviceable criterion of efficiency has been set, and hospitals should strive to maintain this level as a means of valuable post-graduate education for their staffs as well as for their internes."

Education Necessary

How to increase the percentage of necropsies is a constant problem. The main obstacles are (1) objection of the family, (2) opposition of undertakers, and (3) apathy of the medical profession. The family's objections are largely because of sentimental reasons and therefore are difficult to overcome. Nevertheless I am convinced that a physician who has the confidence of the family and makes an honest plea for the necropsy will obtain the consent of the majority of the more intelligent people. The opposition of the undertaker arises from the fear that his embalming will be interfered with, but this can be overcome by education and cooperation. He must be impressed with the value of the examination and must be shown that a properly conducted necropsy actually aids his embalming. The main obstacle is the lack of interest on the part of the medical profession. The doctor must be taught the value of the necropsy as a means of increasing his medical knowledge and judgment so that he will desire an examination in every fatal case. When the medical profession really wants necropsies, they can get them. How else can we explain the fact that our medical schools obtain such high percentages?

Legislative Action

Some authorities have advocated legislation as a means of increasing the number of necropsies. I believe our experience of the last ten years in changing the habits of the people of this country by law is a strong argument against any drastic legislative action. Possibly minor changes that would protect a physician from prosecution, when he acts in good faith, are desirable. We must depend largely upon education of the public and the medical profession to bring about the desired increase. The daily press has cooperated in most instances and must be recognized as an important means of bringing about a more enlightened attitude on the part of the public. There is one phase of our governmental activities which should aid more than it does in increasing the number of examinations. I refer to the coroner's duties. As you know, the coroner is concerned with any deaths of an "unusual or suspicious nature." His duty is to decide the cause and manner of death and if there are suspicious circumstances he shall determine the responsible party or parties. In most states this demands that the coroner shall be an expert in medicine and law, but as Leary[23] has pointed out, "Whether a death is due to criminal violence or not is purely a medical function; the decision as to who caused the death is a legal or judicial problem." Therefore, for the sake of efficiency, the duties should be divided between those trained in medicine and those versed in legal procedure. The method of conducting the coroner's duties in this state is antiquated and wholly unsuited to present-day requirements. I believe that this society should take the lead in making a complete investigation of the system with the object of bringing about such changes as will make it conform to modern needs. The medical examiner system, as conducted in several eastern states, has proved successful and might well be the basis of any change. That a properly conducted coroner's service may be of value in advancing medical knowledge is indicated by the report of Benson[24]

on the frequency of coronary infarcts and cardiac aneurysms. He states that up to 1908, McElroy was able to find only 300 cases of cardiac aneurysms reported in medical literature. In the coroner's investigations at Portland, Oregon, Benson found 72 cases in a series of 1,750 necropsies. LeCount[25] has also cited cases of sudden death which apparently were due to automobile accidents, but in which the necropsy studies indicated that death, due to heart disease, preceded the accident. Deadman[26] has also recently reported a number of cases of unexpected deaths in which it was possible to make diagnoses only after complete postmortem studies. In every community there are sudden fatalities and nobody knows the exact cause of death. It is true that an obliging physician often signs a death certificate, but of what value is it? Is it not a peculiar type of self-deception for a profession that boasts of its scientific attainments?

Summary

The graduate in medicine has learned the fundamentals of his profession. His real education, that of gradually increasing his medical knowledge and of applying it correctly in practice, comes through unceasing study after graduation. Medical judgment, that is, the ability to arrive at a correct decision quickly, is only acquired by a constant checking of results as indicated by the outcome in each case. In fatal cases, an opportunity to correlate his clinical findings with the anatomic changes is presented by the postmortem investigations. The latter will undoubtedly bring to light certain errors of omission or commission but their recognition should stimulate every true physician to overcome his deficiencies. Thus the postmortem examination, when fully utilized, becomes an available means of post-graduate education. The percentage of fatal cases that comes to necropsy is an index of the scientific interest and medical efficiency of physicians, whether working as individuals or in groups. Necropsy is probably performed in not over one per cent of fatal cases in most small or medium-sized communities. The increase in the number, advocated by all leaders in medicine, depends primarily upon the attitude of the rank and file of the medical profession—they can get necropsies if they desire them!

In conclusion, I wish to express my appreciation to the members of the Finley Hospital medical staff for the use of their clinical records and to Doctor Jeannette Dean-Throckmorton of the Iowa State Medical Library, for her aid in preparing the bibliography.

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Discussion

Dr. Harry P. Smith, Iowa City: It seems to me that Dr. McNamara has stated his case most convincingly, and I believe he goes to the heart of the matter when he says that postmortem examinations form the basis of graduate instruction. Postmortem examinations may be conducted in each community, and the community thereby becomes, in part, an independent university and post-graduate medical college. This form of graduate study has, therefore, none of the artificialities of a prearranged college course. It is not limited to a brief portion of the year.

I know from experience that physicians appreciate seeing autopsies. I once inaugurated an autopsy service in a medium sized hospital which had previously had no such service. I was amazed at the interest on the part of the staff. The staff attended all the autopsies and in greater numbers than was the case at the nearby university hospital, where, seemingly, autopsies had become a bit more common and routine.

I have found that there are certain things which the pathologist can do to maintain this interest. He must consider himself, primarily, a teacher. He must, above all, realize that physicians who come to the autopsy room are busy practitioners. They cannot

afford to wait around while a large number of routine maneuvers are being performed by the pathologist. The thoughtful pathologist will take cognizance of this fact and, when possible, will deviate a bit from the routine dissection in order to display, as soon as possible, the essential lesion. It is usually possible, for example, to remove the kidneys ahead of the liver or lungs, if they happen to be the organ of primary interest, or the heart may be removed first and the lesions demonstrated to the practitioners. After they have gone, the pathologist may then examine the intestines and other organs at his leisure. In the end, his report will be complete in every detail. This judicious deviation from routine will increase his popularity with the attending physicians who can only remain a few minutes or, at the most, a half hour.

I agree thoroughly that the clinicopathologic conference is most essential, but I do not think it is a substitute for attendance at autopsy, for in the autopsy room the topography of the exposed organs can be seen, as well as the fresh appearance of the tissues. I believe that only in this way can one learn to visualize the internal lesions of the body. I feel that the physician gains very little unless he personally attends the autopsies of his own patients who have died. A written report to him is no substitute. He should be present for a few minutes at least. He should then help the pathologist in the presentation of his case at the weekly clinicopathologic conference.

In some cases physicians may choose to do their own autopsies, if facilities are available, but as a practical point we must conclude that an organized pathologic service is most desirable. It is essential that the pathologist have the viewpoint of helpful cooperation and that he be thinking of the needs of his colleagues as much as or more than that of his own special interests and needs. Such a man is a teacher in the highest sense. His teaching is not didactic; it takes the form of demonstration, which is much more to the point.

I know that many will maintain that medium and small sized communities cannot always afford the service of a pathologist. This is one of the problems of the future. I know of places where one pathologist or one group of pathologists attend successfully to the laboratory needs of a number of the smaller hospitals within a radius of many miles. I know of other communities in which this method has failed. Much depends on local conditions and much depends on the man obtained as a pathologist. Such problems of organization require careful analysis and varied treatment in individual cases.

I am pleased to see that the larger communities have already forged ahead. I think we may look forward with confidence to the future progress there and in the smaller communities as well.

As Dr. McNamara has pointed out, an active interest and desire for such a service must come first. This is rapidly developing, and I believe that this desire will soon result in effective organization in many communities which are now more or less handicapped in this respect.

Dr. Daniel C. Steelsmith, Sibley: First I want to compliment Dr. McNamara on his very able and timely paper. I feel as the doctor did when he introduced Dr. McNamara, that this is one of the very important subjects that will have been discussed when our meeting is closed.

In the doctor's conclusion he has offered some of the points that I would have made, but I believe they will bear repetition. The benefits derived from postmortems accrue, first, to the medical profession. The results of the research that may not all be concluded at our medical centers, may be substantiated, may be proved, so to speak, and the great benefits that will accrue to the practicing physician in a smaller community will be beneficial to the medical profession as a whole.

Many, many times the family is much interested in the exact cause of death. They have confidence in the physician attending their family. They have reason to believe that his diagnosis has been substantiated or reasoned out correctly. Still, when the patient dies, they feel that there was some little thing that might have been done. A necropsy will assist in substantiating the diagnosis, and the physician, as well as his confreres, will be benefited by his findings.

In the community as a whole we are interested, of course, in the statistical results. Our statistics will not prove of exact benefit if not truthfully given and used. Statistics are not in themselves a science, but by the gathering of certain facts pertaining to the complications and the development of the disease, the community will in time be benefited. Therefore, the benefits may be divided or classified as first, those accruing to the medical profession; second, to the family, as Dr. McNamara mentioned in closing, and third, to the community.

We find approximately 30 per cent of the diagnoses are materially correct at necropsy. You will find that the medical practitioner with a batting average of only about 280 is not interested generally in the correction of his diagnosis. But we know that if the diagnosis is properly and carefully made, if the physician will take time to properly examine his patient, it will lower the percentage of mistakes that we find at necropsy.

Lack of completeness of the physical examination of your patients is, I believe, the source of more errors found at necropsy than any other one thing. It is peculiar, and I am not saying this in a critical way, that when we examine a series of certificates by the physicians as to the cause of death, we find often that a given physician will report a certain line of symptoms rather than the disease causing death. We will find that as high as six or seven deaths in a row, reported by that physician, are caused from the same disease.

The objections to postmortems by the family may be covered very efficiently if we will consider the discussion by Dr. Alvarez last evening. The objection of the family may be overcome by the "art" of the

medical practitioner. As to the opposition by the undertakers, I wish I had a little time to give you some of the thoughts that have been expressed. They do object to the breaking of the circulation that Dr. McNamara referred to. However, that should not interfere and will not interfere.

The apathy of the profession in obtaining these rights of necropsy is one of the obstacles that we must overcome. To do so is an art, not a science, but necropsies may be obtained in a higher percentage of cases than now exists.

A SURVEY OF THE LAW CONCERNING DEAD HUMAN BODIES

David M. Blum, M.D., Des Moines

A recently published bulletin of the National Research Council, Number 73, by George H. Weinmann, entitled, "A Survey of the Law Concerning Dead Human Bodies," contains information covering the following important points with regard to Iowa laws:

"Should a surgeon remove a portion of the body and dispose of it in a manner contrary to the desires of the patient, he would render himself liable for damage." This applies to parts removed at operations.

"Birth means the separation and extrusion of a fetus from the body of a parturient woman. The birth is to be deemed complete when the whole of the body of the fetus—head, trunk, and limbs—is outside the body of the mother, and is a live birth, if after birth the infant breathes. *A stillborn child* is the birth of a fetus after eight weeks' pregnancy, measuring at least 35 cm. from the crown of the head to the sole of the heel, the body being fully extended, and should be reported. *If the deceased (mother) was married* the duty of burial devolves upon the surviving spouse; if she was unmarried but left any kindred, the duty devolves upon person or persons in the same degree of kinship nearest akin to the deceased being of adult age, being within the jurisdiction and possessed of sufficient means to defray the necessary expenses; if she left no surviving spouse or next of kin the duty devolves upon the coroner or other officer holding an inquest upon the body, if an inquest is held; and finally if no inquest was held then the duty devolves upon the person charged with the support of the poor in the jurisdiction where the death occurred."

Concerning coroners and coroner's inquest, the Iowa law, Sec. 5200, provides: "The coroner shall hold an inquest upon the dead bodies of such persons only as are supposed to have died by unlawful means, and in such other cases as are required by law." Sec. 5201 provides that when: "Any person comes to his death in a mine the coroner shall hold an inquest; and no workman in the mine is eligible to serve as a juror." Sec. 3474 provides: "In the event of a sudden or mysterious death of an inmate of any public or private institution for the feeble-minded, a coroner's inquest shall be held."

The Iowa Anatomical Act 2351 provides: "The body of every person dying in a public asylum, hospital, county home, penitentiary, or reformatory in this State, or found dead within this State and which is suitable for scientific purposes, shall be delivered to the medical college of the State University or some osteopathic or chiropractic college or school located in this State which has been approved under the law regulating the practice of osteopathy or chiropractic; but no such body shall be delivered to any such college or school if the deceased person expressed a desire during his last illness that his body should be buried or cremated, nor if such is the desire of his relatives or friends.

"It is further provided that bodies shall be distributed to schools and colleges in proportion to the number of students therein and in accordance with such rules as may be promulgated by the health department of the State."

Sec. 2352 provides that when there are more bodies than necessary to supply the demands of the schools and colleges, the surplus may be distributed to individual physicians for scientific study in accordance with such rules as may be adopted by the State Health Department.

Sec. 2353 provides that "persons having such bodies in charge shall notify, by telegraph the State Department of Health and relatives of the deceased immediately on the death of the deceased and hold the body unburied for a period of forty-eight hours pending instructions from the State Department of Health as to the manner of disposition. Sec. 2354 provides that such bodies must be surrendered to relatives or friends on demand, and that schools or physicians receiving the same must hold them in readiness to surrender them to relatives or friends on demand for a period of sixty days."

Concerning the transportation of a dead body:

"1. A copy of the original death certificate on the standard certificate of death form, signed by attending physician, permit of local Board of Health or Registrar, and a transit label signed by the shipping funeral director, and the initial baggage agent, printed on strong white paper, supplied through the Iowa State Board of Embalmers by the public printers, shall be required for the transportation by common carriers of bodies of persons dying in this State. The death certificate shall contain such information as is required in

the standard form of death certificate, if possible. The health officer's or registrar's permit shall authorize the transportation of the body described in the physician's certificate. The shipping funeral director shall state on the shipping label how the body is prepared, and the local baggage agent shall state thereon the route, name and address of escort.

"The physician's certificate and health officer's or registrar's permit shall be given the escort, to be delivered with the body at destination. The shipping label shall be securely attached to the outside case. If the body is sent by express, the physician's certificate, and the permit shall be attached to the express way-bill and delivered with the body at the destination, and the shipping label shall be attached to the outside case.

"2. The transportation of bodies dead of smallpox, plague, Asiatic cholera, yellow fever, typhus fever, diphtheria (membranous croup or diphtheric sore throat), scarlet fever (scarlet rash or scarlatina), erysipelas, anthrax, and leprosy, shall be permitted only under the following conditions: The body shall be thoroughly embalmed with an approved disinfectant fluid, all orifices shall be closed with absorbent cotton, the body shall be washed with disinfectant fluid, enveloped in a sheet saturated with the same, and placed at once in the coffin or casket which shall be closed immediately, and the coffin or casket, or the outside case containing the same, shall be metal or metal lined, and hermetically and permanently sealed.

"3. The transportation of bodies dead of any diseases other than those mentioned in Rule 2, shall be permitted under the following conditions:

"(a) When the destination can be reached within twenty-four hours after death, the coffin or casket shall be enclosed in a strong outside box made of good sound lumber, not less than seven-eighths of an inch thick, all joints must be tongued and grooved, top and bottom, put on with cleats or cross pieces, all put securely together and tightly closed with white lead, asphalt, varnish or paraffin paint, and a rubber gasket placed on the upper edge between the lid and box; provided, however, that caskets containing embalmed bodies may be shipped to points in this State in tight ordinary casket boxes; and provided further, that bodies addressed to the anatomical board of the State may be received for shipment when prepared in such manner as the State Anatomical Board may direct.

"(b) When the destination cannot be reached within twenty-four hours after death, the body shall be thoroughly embalmed, and the coffin or casket placed in a strong, well-made outside shipping case.

"4. No disinterred body, dead from any disease or cause, shall be transported by common carriers, unless approved by health authorities having jurisdiction at the place of disinterment, and a transit permit and transit label shall be required, as provided in Rule 1. The disinterment and transportation of bodies dead of diseases mentioned in Rule 2 shall not be allowed except upon permission of the health officers both at place of disinterment and the point of destination. All disinterred remains for transportation shall be encased in metal caskets or metal lined boxes, and hermetically sealed; provided, that bodies in a receiving vault when prepared by a licensed embalmer shall not be regarded as disinterred bodies until after the expiration of thirty days.

"5. The outside case may be omitted in all instances when the body is transported in auto or horse-drawn hearse or funeral director's wagon.

"6. Every outside case shall bear at least four handles, and when over five feet six inches in length, shall bear six handles.

"7. An approved disinfectant fluid shall contain not less than five per cent of formaldehyde gas; the term 'embalming' as employed in these rules shall require the injection by a licensed embalmer of not less than ten per cent of the body weight for bodies of persons dead of diseases in Rule 2, injected arterially, in addition to cavity injection; not less than six per cent of the body weight injected arterially in all other cases, in addition to cavity injection, and ten hours shall elapse between the time of embalming and the shipment of the body."

In addition to the foregoing rules, the following statutory regulations have been adopted:

Section 2330 of the Code provides that "no person or common carrier shall ship or receive for shipment within this State or to any point outside the State, by any public conveyance, a dead body unless the box containing the corpse shall have attached thereto an embalmer's certificate showing the name and official number of the embalmer by whom the body was prepared, and the method of preparation employed."

Section 2331: "In addition to the requirements of the preceding section, the person accompanying the body shall have in his possession: 1. A copy of physician's or coroner's certificate of cause of death. 2. A transit permit issued by the local board or local registrar."

Section 2336 provides that "the above mentioned rules shall not apply to bodies shipped for scientific purposes in accordance with the state anatomical act—that regulations for the shipment

of such bodies are to be made by the State department."

The law regarding interment of dead bodies in Iowa is: "No human body shall be buried, cremated or otherwise disposed of, or removed from or into any registration district, or be temporarily held pending further disposition more than seventy-two hours after death unless a permit for burial, removal or other disposition thereof shall have been properly issued by the local registrar of the registration district in which the death occurred or in which the body was found. And no such burial or removal permit shall be issued by any registrar until a complete and satisfactory certificate of death has been filed with him as herein provided."

Section 1147 provides that "whenever any person complains to the health authorities that a dead human body has been kept unburied, and is offensive, the health officer shall make an affidavit in the probate court setting up the facts of which he was informed, and the court shall issue a warrant to the sheriff directing him to cause the body to be interred or cremated, according to the wishes of the nearest relative of the deceased, at the expense of the estate, husband, parent, or guardian, or at public expense, as circumstances warrant."

Regarding disinterment of dead bodies, the Iowa Code provides: "After making the usual provision for the procuring of a permit to disinter, the State Department of Health may prohibit the disinterment of bodies dead from infectious or contagious diseases. It is further provided that bodies temporarily deposited in a receiving vault shall not be considered as having been interred.

"It is further provided that no person shall disinter any body for the purpose of making an autopsy to determine the cause of death without an order from the district court in the county in which the body is buried, or a special permit from the State Department of Health."

It is then provided in Section 2341 that "no application for a permit to disinter for the purpose of making an autopsy to determine the cause of death shall be granted by the said court of the said department unless the circumstances of the death of the deceased are such as to cause the belief that some person or persons was or were criminally or civilly liable for such death. A proper showing shall be made in every case, and due consideration shall be given to the public health, the dead, and the feelings of relatives and friends. The limitations of this section shall not apply when the application is made by the surviving spouse or next of kin."

It is further provided that the casket shall not be opened or permitted to be opened; that all disinterments shall be made under the supervision of a licensed embalmer; and that such disinterments shall be performed in accordance with such rules as may be promulgated by the State Department of Health.

In regard to *autopsies and postmortem examinations.* (Corpus Juris, Criminal Law, XX, Page 1144.) The general rule is that the unauthorized autopsy of a deceased person's body is a tort, giving rise to a cause of action for damages. A physician making an autopsy with the consent of the person entitled to the right of sepulture is not liable to an action for damages. It has been held, on the one hand, that it is no defense to an action for damages resulting from an autopsy on a body without the consent of the next of kin that defendant, the attending physician, performed the autopsy to ascertain the cause of death so as to be able to certify it as required by statute. On the other hand, it has been held that an autopsy performed by a physician in accordance with the law, in order to obtain a certificate of burial from the board of health, does not render the physician liable in an action for damages, where it is performed in a proper manner, although without the consent of the person having the right of sepulture; and that such an autopsy does not render an undertaker having charge of the body liable for permitting the examination to be made. But an undertaker who has taken charge of the body at the request of persons entitled to its custody and who afterward permits physicians to make an unauthorized autopsy is jointly liable with the physicians. Where an attending physician made an incision in the body shortly after death to ascertain the exact cause of death, there being no dismemberment or removal of any part or organ, it is not such mutilation of the body as to give the widow of deceased a cause of action.

Removal of organs. Where a widow consented to a postmortem examination of her husband's body for the purpose of ascertaining the cause of his death, the consent so given must be held to have implied a permission to conduct the examination in the usual manner, and if the removal of some of the organs for microscopic examination was necessary or proper to effect the purpose of the postmortem, the persons conducting it were not guilty of an actionable wrong in so doing, unless permission to remove them was expressly withheld at the time the consent to the postmortem was given. A condition in the consent that no part of the body should be taken away did not necessarily prohibit the taking of a part to the office of the surgeon for

examination, if it was duly returned and replaced for burial.

A slight incision by the attending surgeon to ascertain the cause of death, authorized by the board of health of the city ordinance in order that a certificate of burial may be obtained, where there is no cutting or removal of any limb or organ, and the incision is properly closed, does not infringe the right of a husband to the dead body of his wife in the condition which death leaves it. Rushing v. Medical College, 4 Ga. 823, 62 SE 563.

Palenzke v. Bruning, 98 Ill. A 644; holding that, although the statute authorizes the coroner, when informed of a death of violence, to repair to the place where the dead body is, take charge of the same, and summon a jury of the neighborhood to assemble and inquire into the cause of the death, where a coroner takes the body of a deceased which has been coffined for burial from the parent's possession, mutilates it, and removes parts of it which, without such parent's consent, he throws away, such parents may maintain an action against him for damages for such outrage to their feelings.

Young v. College of Physicians, etc., 81 Md. 358, 32 A 177, 31 LRA 540; holding that a medical examiner who is required to make a postmortem on the direction of the coroner is not responsible to the relatives of the deceased, where he does not disfigure the body more than is necessary; Hassard v. Lehane, 150 App. Div. 685, 135 NYS 711.

Autopsy performed by or on order of coroner. The authority of a coroner to ascertain the cause of death in certain cases must be exercised in a proper manner. If an autopsy is performed by a physician under the direction of a coroner in a proper manner, the physician is not liable for dissecting the remains; and the issuance and service of a subpoena on the physician is not indispensable as a direction to make an autopsy. If, however, the coroner's physician who is authorized to make an autopsy on the remains when directed by a coroner proceeds to do so without any direction, he is liable for an action for the unlawful dissection. Furthermore, although an autopsy may be authorized by a coroner, this does not justify the removal and detention of any organs of the deceased by the coroner's physician, in the absence of a further direction. Where there is a statute requiring all citizens to report deaths of a suspicious nature to a coroner, it is necessary that the report be false in order to render a person liable for a dissection made by a coroner on his report.

Persons entitled to recover. Where the remains of a deceased husband or wife are unlawfully mutilated, the surviving spouse is entitled to maintain an action for damages. In the absence of a surviving spouse, a son is the lawful custodian of the body of a deceased parent for preservation and burial, and hence may maintain an action for an unlawful mutilation of the body. The father of a child, who is its natural guardian, has such a right to its dead body that he may maintain an action against one to whom he intrusted the child for treatment, and who, without his consent, performed an autopsy on the dead body. So a mother legally entitled to the possession of the corpse of her son may recover of one illegally dissecting or otherwise mutilating the remains. The personal representative of decedent cannot maintain an action for damages for the wilful or negligent mutilation of decedent's body, although he may sue for injury to the wearing apparel of decedent and property on his person.

Next to kin, heirs, and distributees. (Corpus Juris, Criminal Law, XX, Page 1218.) The designation "next to kin" is ordinarily limited to the blood relations, and does not include husband or wife, or adopted children, or their adoptive parents, unless accompanied by other words showing a legislative intent to include them. A provision that the recovery shall be distributed among the beneficiaries in the same manner as personal property of the deceased has been deemed to bring within the term "next to kin" all persons who would take personal property of decedent by intestate succession under the statute of descent and distribution, and in accordance with this view the term "next to kin" has been held to include the husband, the wife, and kindred by adoption, to the exclusion of the natural kin of the adopted child, although it has been held, notwithstanding such a statute, that the husband is not next of kin of his wife. Brothers and sisters have been held to be the next of kin to the exclusion of the mother. In some jurisdictions, where decedent leaves no widow or child, the father is the sole next of kin to the exclusion of the mother, sisters, and brothers; in others the father and mother are both next of kin. The words "next of kin" as used in some statutes do not include children of deceased, although they are in fact next of kin, but they do include grandchildren, and a brother or sister en ventre sa mere at the time of the accident and afterward born alive. The word "heirs" used in statutes as descriptive of the beneficiaries has been construed variously as including all persons entitled to inherit from decedent, and as limited to children, or the widow and children, excluding a surviving husband, parents, and collateral relatives. Some statutes without expressly naming beneficiaries provide for a recovery in the name of

the personal representative to be distributed as provided by law in the case of personal property of persons dying intestate.

Illegitimates. Statutory rights of action given kindred for injuries done another do not embrace illegitimate kindred, without express mention. A bastard is not a child within the meaning of the statute, and therefore an illegitimate child cannot recover for the death of its mother; and the father or the mother cannot recover for the death of their illegitimate child, under statutes naming children and parents as beneficiaries. So where the statute gives a right of action to a brother or sister, such right cannot be extended to include an illegitimate brother or sister. And even the word "dependent" has been held not to include the illegitimate child. But where there are statutes substantially legitimizing bastards as to the mother, or conferring on them the right to inherit or transmit inheritances from or through the mother a mother may recover for the death of her bastard child, and such child may recover for the death of its mother, under the designations of parent, child, or next of kin; and as next of kin, brothers or sisters who are children of the same mother may recover notwithstanding illegitimacy. The rule is broad enough to let in any next of kin in the maternal line. It is immaterial that such enabling statute was enacted and took effect subsequent to the statute creating the cause of action for death. But such a statute does not affect the situation as between the child and its father, and neither can recover for the death of the other. Where the parents of illegitimate children are bound to educate and support them, it has been held that such children may recover for the wrongful death of their father.

Case Report

GENERALIZED FETAL EDEMA

William F. Mengert, M.D., Iowa City*

Generalized edema of the newborn has been recognized as a clinical entity for many years. Guillemeau (1621), Mauriceau (1681), and others, knew and described the condition. Ballantyne collected sixty-eight cases prior to 1900, Schumann added thirty-eight cases in 1915, and Hartman, in 1928, reported thirty-one new cases from the German literature.

Ballantyne's definition is, "A morbid condition of the fetus, characterized by general anasarca, by the presence of fluid effusions in the peritoneal, pleural, and pericardial sacs, and usually edema of the placenta, and it results in the death of the fetus or infant, before, during, or very soon after birth."

Several more or less constant factors seem to be in evidence: (1) The mother is usually well advanced in her child bearing life, that is, she has usually had a number of previous pregnancies, and her age is generally more than thirty years. (2) The history of the previous obstetric episodes of the mother is often bad in one or more features. (3) The maternal health during the pregnancy resulting in the birth of the edematous fetus is usually impaired. (4) Syphilis is seldom present, and surely cannot be considered as an etiologic agent. (5) Maternal toxemias, characterized by edema, albuminuria, and hypertension, while not a constant concomitant, occur with great frequency and are considered by some authors as the most probable causative factor.

The etiology is still obscure. Broekhuizen classifies the actual causes found as follows:

Fetal Causes

1. Heart and Vessels
   a. Fetal endocarditis
   b. Congenital absence of a chamber of the heart
   c. Small foramen ovale
   d. Obliteration of Botalli's duct
   e. Displacement of the heart and vessels following diaphragmatic hernia
   f. Situs inversus
2. Kidneys and Genito-Urinary System
   a. Congenital
      (1) Aberrant artery pressing on umbilical veins
      (2) Cystic degeneration
   b. Hypertrophy of kidneys
   c. Hyperplasia of kidneys
   d. Fetal nephritis
3. Liver
   a. Hypertrophy
   b. Atrophy and cirrhosis
   c. Hypertrophy of the liver and spleen
4. Blood
   a. Fetal leukemia
5. Fetal syphilis
6. Fetal peritonitis
7. Absence of the Thoracic Duct

Conditions Outside the Fetus

1. Thrombosis of the umbilical veins
2. Edema and hyperplasia of the placenta
3. Hydrops of the entire ovum

Remote Maternal Causes for Anasarca

1. Malaria
2. Endometritis
3. Hydremia
4. Leukemia
5. Chronic nephritis and kidney of pregnancy

The following case is of interest both for the

* From the Department of Obstetrics and Gynecology, State University of Iowa.

delivery of the dropsical fetus, and because the mother had previously had five stillborn fetuses, at least two of which were edematous.



Fig. 1

The patient, aged 34, an octipara, was admitted to the University Hospital October 22, 1930, in the seventh lunar month of her ninth pregnancy. Five of her previous pregnancies had terminated in the birth of stillborn fetuses. Two of these were at term, one was at the ninth month, and two were at the seventh month. A letter from the physician who attended the patient in most of her pregnancies says, "Two of the babies were so badly decayed that I do not know about the edema. The rest (of the stillborns) were edematous." From the onset of the present pregnancy, March 28, 1930, there was edema of the feet extending on occasion to the knees, and there was nausea and some vomiting for the first five months. For the six weeks prior to admission, there had been a fast heart rate, and occasional attacks of dyspnea necessitating bed rest. Quickening was noticed five months after the last menstrual period. On admission there was found a mild bronchitis which cleared up within a few days. The thyroid was slightly enlarged. The heart was essentially negative, but the pulse rate ranged between 120 to 125 per minute. The blood pressure was never more than 130/80 on eight readings. There was edema of the lower extremities reaching to the knees, and pressure over the tibia produced pits varying from ½ to 1 centimeter in depth. There was a slight trace of albumin in the urine on admission, but this finding could not be duplicated on six successive examinations. The blood Wassermann and the Kahn tests were negative, and an electrocardiogram showed an apparently normal heart. The basal metabolic rate was plus 18.3 per cent. The sella turcica was normal in size, and x-ray of the chest showed evidence of an old "healed" parenchymatous involvement of the apex of the right lung.

On the thirteenth of November, 22 days after admission, and in the eighth lunar month of the pregnancy, the patient delivered spontaneously a 2,635 gram female child, 42 centimeters in length, from a persistent occiput posterior position, after a labor lasting 13 hours and 15 minutes. The baby was cyanotic, had a general anasarca, and made several ineffective attempts to breathe. Its heart continued to beat at the rate of about 35 beats to the minute but ceased, despite all attempts at resuscitation, 43 minutes after delivery. The placenta was very large (1,265 grams), almost half the weight of the baby, was a pale yellowish pink color, was granular in appearance, and was very friable. The membranes were meconium stained, and the cord was 62 centimeters long. Unfortunately miscroscopic sections of the placenta were not obtained, but bits of it were teased out in normal salt solution and studied microscopically. The villi were granular, clubbed, edematous, and the vessels were largely obliterated.

No gross pathologic change was found at postmortem examination of the baby to account for the marked edema which was in evidence throughout the tissues. Petechiae were found over the body surfaces, and many of the serous surfaces. Microscopic sections showed indications of an infectious or toxic element. The heart muscle had



Fig. 2

the same general edema, and the lungs showed interstitial pneumonia. There was evidence of blood destruction as indicated by many epithelioid cells, containing hemosiderin, in the liver. Perhaps the greatest change was found in the kidneys, microscopic sections of which showed a definite parenchymatous nephritis. There was a rather marked diffuse leukocytic infiltration. The epithelium lining the tubules showed cloudy swelling, and in many places was desquamated into the lumen. Many of the tubules contained hyalin casts. The blood culture at postmortem examination showed streptococcus nonhemolyticus, B. coli, and Staphylococcus aureus.

COMMENT

Obviously this child falls into the group of fetal nephritis of unknown etiology. The mother

had a bronchitis on admission, but even though this might account for the present edematous fetus, it would not explain the others.

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A CORRECTION

In an article appearing in the September issue of the Journal entitled, "Methods of Diagnosis" by Dr. Eli Grimes of Des Moines, on page 505 the following statement appeared: "Blood and spinal fluid tests are positive in only 25 per cent of syphilitic patients over twenty years of age." This statement should have read: "Blood and spinal fluid tests are positive in only 25 per cent of syphilitic patients over fifty years of age."

We regret that this error should have occurred in the publication of this article.

MEDAL TO DR. MARTIN

At a recent sectional meeting of the American College of Surgeons, which included the Western States and the Western Provinces of Canada, the Fellows of the College from California presented a gold medal to Dr. Franklin H. Martin, director-general of the College, in token of his distinguished service as a surgeon, editor, organizer and administrator. Dr. Martin organized the American College of Surgeons in 1913, and has held the office of director-general since 1928.

GOITER CLASSIFICATION AND NOMENCLATURE

The American Association for the Study of Goiter recently announced its approval of the following clinical classifications of goiter: Type 1, nontoxic diffuse goiter; type 2, toxic diffuse goiter; type 3, nontoxic nodular goiter; type 4, toxic nodular goiter. Concerning nomenclature, the association advocates a policy of using the simplest and yet the most descriptive terminology possible. The use of proper names and coined words is discouraged. Emphasis, it was pointed out, should be made on the importance of not confounding varieties and sequelae with types. The use of such terms as exophthalmic, hemorrhagic, cystic, adolescent, colloid, intrathoracic, substernal and congenital are proper when used to describe varieties, but only constant characteristics should be used to designate types, it was said.

CRIME COMMISSION RECOMMENDS PSYCHIATRY

A committee on medical affairs of the voluntary and privately financed National Crime Commission established by the late Judge Elbert H. Gary, has recently reported to that organization. The report treats as separate problems, (1) committability, (2) responsibility, (3) triability, and (4) disposition of persons charged with crime. The committee offers definite recommendations which will be of interest alike to the psychiatrist and jurist. Their recommendations are as follows:

1. That the several states establish as rapidly as practical appropriate institutions for the various types of offenders, in order that a greater degree of classification may be brought about.

2. That the larger courts be encouraged to establish their own psychiatric clinics and that the state establish, so far as possible, facilities which shall be available to the smaller courts, to the end that each court may have available to it a psychiatric service made up of competent and impartial psychiatrists, psychologists and social investigators.

3. That the several states extend the principle of the indeterminate sentence and the greater discretion of judges in disposing of cases.

4. That as a means of avoiding the scandal attendant upon the prevalent system of psychiatric expert testimony, the several states be urged to adopt a law similar in principle to that known in Massachusetts as the "Briggs Law," providing for the impartial and routine examination under state authority of persons held on criminal charges. The extent of the groups so examinable might well be dependent partly upon the laws of the particular state and partly upon the availability of competent psychiatric personnel.

GOVERNMENT CONTROL OF DIGITALIS

Since the congressional appropriation for the Food and Drug Administration of the Department of Agriculture for 1931 provides an increased amount of $75,000 for this work, Dr. J. J. Durrett, chief of this division, has announced an extended program for the coming year.

It is his plan to parallel the study conducted during the past two years concerning the standardization of ergot by a study relative to digitalis.

It is the observation of this department that many digitalis preparations offered for sale today by pharmacists are of questionable potency due to incorrect preparation, or the age of the drug. It will be the purpose of the department to determine the reason for the deterioration of these preparations and if possible to arrive at a method of correcting these irregularities. It is suggested that an assay of each batch of these drugs will be required, that the drug will be put up in smaller packages, and that on each package the manufacturer will place the date of manufacture, allowing the distributors return privilege so that aged products will not be sold.

STATE HEALTH COMMISSIONER'S PAGE



MATERNAL AND CHILD HYGIENE

FUNDS AND ADMINISTRATION

The last legislature appropriated $14,350 to the State Department of Health for maternal and child hygiene work. The State University added $5,000 of its state appropriation to this amount making a total of $19,350 for each year of the present biennium to be administered solely by the State Department of Health for promotion of the health of mothers and children in Iowa. When the above mentioned appropriation became available to the State Department of Health on July first of this year the program was entirely taken over by the department. Under agreement between the University and the Department of Health the maternal and child hygiene work of the University will consist of research, as well as intramural and extramural education in medicine, dentistry, nursing and welfare work. Under this agreement the maternal and child hygiene activities of the Department of Health are tentatively planned as follows:

AIMS OF WORK

To save lives and protect the health of mothers and children through information and instruction provided by the Bureau of Maternity and Child Hygiene and the promotion of adequate medical care for mothers during the prenatal, delivery and postpartum periods and for children through infancy and the preschool and school ages.

PLANS

Publication of articles on maternal and child hygiene subjects in local newspapers, magazines and other periodicals in cooperation with the State Medical Society.

Addresses to lay groups through cooperation with the State Medical Society.

Periodic letters of information to expectant mothers and classes for expectant and prospective mothers, the keynote of which is the need of medical care, medical examination early in pregnancy and medical supervision throughout pregnancy, delivery and the puerperium with final examination and necessary repairs before dismissal by physician.

Distribution of publications on maternal and child hygiene.

Aid in the promotion and organization of circuit post-graduate courses in obstetrics, gynecology and pediatrics for practicing physicians in cooperation with the State Medical Society and State University.

Assist in all phases of public health nursing.

Promote birth registration, control of communicable disease and immunization.

Promote maternal and child health consultations and conferences in cooperation with county medical societies. Assist through county medical societies with permanent local maternal and child hygiene service for those unable to pay for such service.

Promote health education and training in health habits for all children in public schools.

UNDERSTANDING WITH STATE MEDICAL SOCIETY

It is the wish of the State Department of Health that there be a perfect understanding with the Iowa State Medical Society regarding its entire plan for maternal and child hygiene work in order that it may have the cooperation of the society as a whole, the constituent county societies and of individual practicing physicians.

Suggestions of the society for improvement in the plans or in their administration are not only welcome but are invited. Already there have been requests for service but these are being held up pending final decision of the Council of the State Medical Society in the matter of cooperation of the Society in this work. Complete tentative plans have been submitted to the members of the council for their consideration.

SPECIAL ARTICLE

RELATIONSHIP OF STATE MEDICINE AND CIVIL PRACTICE*

Frank L. Williams, M.D., Des Moines

Part I

The short space at the disposal of the writer will allow for only a brief allusion to several factors relative to state medicine, but if this short allusion begets more serious thinking as to the future of medicine, it will not have been in vain. Because of the inroads made by so-called state medicine during recent years, it has been loosely estimated that as high as one-third of our adult population receive gratuitous medical treatment in some form from the nation, state, or municipality.

Depression periods, like the present one, but give pause to the thought that the practice of medicine has long since emerged from an ideal to a combined ideal and business. Gone long since, and by necessity, are the medical men who practiced their profession because of the love of so doing, heeding not the business side, and in their wake are come those who must look more closely not only to the medical side but to the business side of medicine.

The field of state medicine in its entirety practically controls the prevention of diseases. Its advent probably occurred in the year 1798 when the United States Public Health Service was first legalized to handle a limited amount of preventive and clinical medicine. Public health service was expanded materially in the year 1890, since which its scope has become large and its duties manifold. Parallel to this growth is the development of the individual state health boards, the first of which was the Massachusetts State Board of Health, established in 1869. Following these, county units were established; later, all states and territories developed health boards, and many counties, cities and subdivisions of the above established more or less similar units. Recently the public has shown greater activity in this field, particularly the larger corporations, most of which have not only experimented in the field of preventive medicine, but have highly efficient oranizations for the practice of clinical medicine. As this progress is the result of a reasoning public, it is hardly possible that an about-face would be executed. In fact, this trend has been greatly amplified in numerous instances by private citizen groups, and by the establishment of many clinics, such as the large venereal disease clinic located in Chicago. Many clinics have been established for many good reasons, but some without reason, as those instances in which fawning, fatuous dowagers, with time unoccupied and no aim in life, have found an outlet for their unused energy by the establishing of such clinics; clinics manned gratuitously by medical men, who bargain for the doubtful honor by giving their services free, really supporting the institutions whose "charity" patients are too often draped in furs of the ermine type. The latter group are not strictly state efforts, but are to a more or less degree allied.

The medical profession would be second to none in its desire to see that every worthy individual gets proper medical attention; however, in many instances the desires of the medical profession in this matter are grossly taken advantage of. The president of the Medical Society of New York County said recently that the free treatment which American physicians give to 500,000 persons daily means a burden of $365,000,000 a year on the medical profession. He considers it poor economics and poorer ethics to throw on physicians the cost of free service to a society that spends three times as much for tobacco as for medical services; and he suggests that the whole unsound system be replaced by medical insurance or a deferred payment plan. However, to apply to the practice of medicine the standards of individualistic economics is to overlook the fact that medical service is essentially a public function, like education or sanitation. It is for this reason that Dr. Wynne, health commissioner of New York, says that we shall have state medicine unless the profession itself solves its own problems.

Winslow says, "Public health is the science and art of preventing diseases, prolonging life and promoting physical health and efficiency through organized community efforts for the sanitation of environment; the control of community infection; the education of the individual in principles of personal hygiene; the organization of medical and nursing services for the early diagnosis and preventive treatment of diseases and the development of the social machinery which will insure to every individual in the community the standards of life adequate for the maintenance of health."

Because of this definition, then, let us remember that public health in this ever changing world, is, and rightly so, a direct charge to medical men, and is but secondarily a direct charge to the public.

New diseases and new disorders are being recognized and discovered, demanding study and inves-

*Presented before The Polk County Medical Society, March 31, 1931.

tigation for their prevention, control, and suppression. Other diseases lose their significance through changing virulence, a community immunity, modifications in relieving conditions, or the development of other and more stringent methods for their prevention, while still other diseases, long recognized, become of greater relative importance and significance. No disease exists that is not the business of the public; hence, no health problems have escaped the consideration of the body politic, which consideration is increasing with time. This public interest is a natural one, and perhaps could well be attributed to the first law of nature, self-preservation, because after all, public health means your health and my health.

The citizens of this country are not pioneers in the matter of state medicine, but are perhaps slow followers, since a great number, at least twenty-seven, of the prominent foreign countries have been experimenting along this line for many years. Germany, with her insurance against sickness, and later, England, with her panel system, have explored further into the domain of state medicine than other countries. England now has on foot a new form of medical socialism. The National Health Insurance Act heretofore cared for only the working class and a section of the middle class earning small salaries and otherwise regarded as unable to pay for necessary medical attention and the other expenses of illness. The Public Medical Service Association,[1] recently formed, aims at establishing a service available to every member of the community, and by this means completely socializing the medical profession. The idea of the promoters of this latest movement is that health is of such vital national importance that the question of a person's means in securing necessary treatment should never arise. Their object is to provide every necessary form of medical, surgical, obstetric, dental, and preventive treatment, coordinated as one service under the ministry of health. It would entail provisions for all necessary incidental treatment, consultant and specialist service, and would be available to every man, woman, and child, irrespective of class or income.

It is thought that a large portion of physicians are prepared to consider the proposal, and that if legislation comes, the profession will bow to the inevitable. Difficulties arose when the Health Insurance Act came into operation, for many physicians refused to work and never permitted themselves to come within its scope.

Something of the nature of this proposed movement is already in operation at Swindin, a town inhabited by railroad men and their families, where all the physicians work together and attend the entire population in rotation. Arguments used in favor of this service are that it insures funds for the financial problems of medical service and frees physicians from the pecuniary uncertainties of private practice; that it provides a large sum required in scientific investigation for the prevention of diseases; that it gives a more equal division of physicians as between rich and poor areas, and that it places the hospitals on a sound financial basis.

While some may say that we, in this country, would never adopt a similar system to that of the English, and that such a system would not work, let us remember that we speak the same language and that several years ago we scoffed at the English Dole System, but today laws that are its counterpart have been given serious consideration by law making bodies.

State medicine, as represented by the Public Health Service, has taught us many things. One outstanding fact is that mental health is a great part of the public health problem, because the public pays the bills, and that approximately five out of each 1,000 persons are feeble-minded, and that if this ratio is correct, 500,000 feeble-minded persons reside in the United States. Besides this, there are a large group of so-called nervous individuals and neurastheniacs whom the interested public has dubbed the "shell-shocks of civilization," and we also have the convulsive group.

Immigration laws mandatorily exclude the insane, idiots, imbeciles, feeble-minded, chronic alcoholics, constitutional physchopathic inferiors, and mental deficients. Even with this banning, foreign-born persons furnish the highest portion of admissions to state hospitals; native born of foreign parentage, or mixed parentage are next, and natives represent the lowest portion.

State medicine, through the Public Health Servive, gives attention to the prevention of mental disorders and the conservation of mental health. Ameloriation of adverse mental states is brought to our attention by the ever increasing number of persons with mental disorders, seeking aid in public institutions. For instance, over the fifty-year period, from 1880 to 1930, the rate in state hospitals for the insane increased from 81 to 221 per 100,000 population.

The Public Health Service also assumes the responsibility for the prevention of introduction and spread of infectious diseases from foreign countries into the United States.

One of the problems that intimately connect you with the work of the Public Health Service is the shell fish on your table. It is the responsibility of the Public Health Service to see that shell fish are grown in suitable water and handled in a sanitary

manner. More recent problems are those of automobile tourists in our public parks, and railway tourists, which bring up the additional problems of sanitation, water supply, sewerage disposal, incineration of garbage, destruction of other waste, and protection of food supply, mosquito control, and so forth.

Numerous health surveys[2] are carried on as demonstration projects in rural health work, in cooperation with local health authorities, in such problems as sanitation of homes and public places, acute communicable disease control measures; tuberculosis control; malarial control; cancer control; leprosy control; pellagra control; Rocky Mountain spotted fever control; typhus and yellow fever control; nutritional disease control; goiter prevention; infant and maternity hygiene; venereal disease prevention, and school hygiene. These, and other surveys have led to the deduction that there are over one million persons incapacitated at all times by illness, much of which is preventable: that about 70 per cent of school children are handicapped by physical defects, mostly preventable or remediable, about 30 per cent of persons of military age are not capable of arduous, productive labor, or military duty, mostly because of preventable conditions; and that over 60 per cent of men and women 40 to 60 years of age are in serious need of physical reparation, largely as the result of preventable conditions.

A medical survey in juvenile court work indicates that results are akin to those in a survey of thirty thousand school children which indicated that twenty of each thousand could not profit by the course of study. Some were feeble-minded, others belonged to that twilight zone between normality and feeble-mindedness, others were mentally retarded, while others, because of emotional instability and faulty habits or through their conduct, were problem children in school and home.

With the above conditions, then, is it any wonder that the public is interested, and that many authorities in public health, and public thinkers generally, are of the opinion that efficient, whole time, local health organizations will yield a greater rate on the dollar invested, in relief service and sickness prevention among all groups of both sexes, than any program limited to special diseases or particular elements? In furtherance of this general opinion, Congress, under date of May 26, 1930, changed the name of the Hygienic Laboratories to The National Institute of Health; provided for additional buildings, fellowships, and for the acceptance of private gifts for further study of the fundamental problems in relation to the diseases of man.

Medical facilities have more recently been provided in 155 ports of the United States and its insular territories, including seamen and merchant vessels and beneficiaries of the Public Health Service. Recently also, an act of Congress established a division of mental hygiene in the Public Health Service, and placed thereunder the securing and furnishing of medical and psychiatric services in federal penal and corrective institutions. Authority was also granted for special study of addictions.

The Public Health Service consists of about 1,500 medical and scientific workers and 3,500 general and technical employees.

That state medicine should be, and has been, receiving serious consideration by medical men, is evidenced by the multiplicity of the state organizations involved in the movement, and by activities of the many different medical societies relative thereto.

Thirty different federal departments deal with public health; a few are enumerated as follows: Federal Insane Hospitals; Indian Affairs; Animal Industry; National Vital Statistics; Bureau of Chemistry; Drug and Food Analysis; Bureau of Mines; Bureau of Education; Bureau of Medicine for Alaskan Natives; U. S. Employees Compensation Commission; Women's Bureau; Army, Navy, Public Health Service; U. S. Veterans' Bureau. In addition to these, there are the different state boards of health, county organizations and city organizations, besides the semi-state organizations, such as corporations and insurance companies, and so forth, which in many instances have very ample organizations. Outstanding subdivisions of some of the above organizations are the national soldiers' homes, state soldiers' homes, and county homes; fifty-four regional offices of the U. S. Veterans' Bureau, and fifty-five U. S. Veterans' hospitals. All of the above care for a great number of people.

As an example of this, the Veterans' Bureau[3] under the Reed-Johnson Act has the potential care of practically five million citizens, irrespective of when, where, or how, they received their disabilities.

Steps toward legislation for further care of citizens are many; for example, during the last Congess, an act was considered for extending to the ex-service men outpatient treatment in the clinics of the regional offices of the U. S. Veterans' Bureau, irrespective of when or how their disabilities arose. At a previous time, a proposal was presented to accord medical care to the dependents of ex-service men. This proposal probably will receive further attention in the not too distant future.

Many other bills along this and allied lines have

been introduced. Then there has been the attempted revival of the Shepard-Towner Maternity and Infancy Act, an act which originally came into being on November 23, 1921, and expired June 30, 1929. A bill for its life extension was introduced into Congress in 1929 where, with its several modifications, it had a rather stormy siege.

Concurrent action, somewhat similar in character, has been attempted in a number of the state legislatures. The most outstanding of these, perhaps, is the House Bill No. 351, considered by the state of Massachusetts; a bill to create a Department of Public Medicine[4] to furnish to all citizens, without cost to them, hospital and medical services in all cases of sickness, accident, and childbirth, including transportation to and from the hospital, maintenance in a hospital, and drugs, as well as any artificial appliances or limbs required. This, if enacted, would have been a concrete wedge for state medicine. The other bill proposed that the department of health furnish authority to the board of health of the city or town where a tuberculous person resides to send such person to a hospital for necessary treatment, at the expense of the city or town.

A review of the literature would indicate that more and more legislation is being proposed or enacted that in some way affects the practice of medicine, such as registration bills, hospital bills, bills to regulate the sale and possession of drugs, workmen's compensation bills, asexualization bills, and many others equally important, as well as some not so important.

Iowa, too, is not without its medical legislation problem, as witness the recent commendable action of the State Medical Society's legislation committee towards clarification of the medical practice act of the state of Iowa.

Forty-two states, at the present time, have compensation laws designed to cover the risk of occupational diseases and industrial hazards. These laws, as elsewhere in the world, interpret the risk of occupational organizations as part of the cost of doing business. Seventeen states have established insurance funds, seven of these states have monopolies and all the industries in such states that carry insurance with an out-of-state provision, must have their insurance in the state fund.

A number of the states have considered sickness insurance in one form or another. Nine state commissions appointed for study of these problems have submitted reports; five of those commissions recommended compulsory sickness insurance and four brought in reports opposed to it.

It appears that in 1919, a proposal for health insurance appeared in the state legislature of twenty-two states of the Union. It was the contention at that time, that unless compulsory health insurance obtained, state medicine would prevail. In the last two years more of this discussion is coming into the foreground. A pertinent question here is, if such a system should prevail, had it better be administered by physicians, as in Denmark, or by overseers, as in England. That this is a live subject is indicated by the fact that it was reported[5] that forty-five articles were published in medical journals from May to October, 1930, inclusive, dealing more or less with the question of state medicine.

As regards state medicine in England,[6] one of the principal objections has been that the patient is deprived of the individual choice of a doctor. The old original British Act, in one of its earliest clauses, provided that the individual would have the choice of a doctor, and the Panel Board, in assigning patients to doctors, assigns those who have not exercised the right of choice. The individual has the right of choice of his physician, and the physician has the privilege of saying that he will not accept the case on his panel. In such disputed cases, the Panel Board handles the question.

There are, at the present time, about fourteen thousand doctors on the panel in England and thirty-two million dollars were distributed to them by the government over the year, which averages twenty-two hundred dollars per doctor, for his panel work only. His panel work is in addition to other work that he may care to do. Under this system, it appears that in England the physicians are paid for the care of many patients who, heretofore, either did not pay their bills or were unable to do so. It is reported that about one-third of the physicians in England are on the Panel System, and that 90 per cent of them are in favor of the present program.

It would seem that medical practice in Germany under the compensation system is at present less satisfactory than that in Great Britain, because of the much smaller remuneration received. It would seem that the system in Denmark is more satisfactory than in any country. It is thought that this is due to the fact that the medical societies are responsible for the administration of the insurance act, and have been directly charged with the responsibility of maintaining the quality of medical care. In Holland conditions are also reported satisfactory.

Coming home to our own state, Dr. Robert L. Parker of Des Moines, in the American Medical Association Bulletin of December, 1930,[7] has contributed a vital study towards the care of the indigent sick by the county medical society contract.

Thus the county medical society enters into the domain of state medicine. Dr. Parker's article appears to point the way toward a better handling of indigents and at the same time guarantees to the physician more just financial remuneration.

Dr. Parker quotes Dr. M. H. Harris, past president of the American Medical Association, as repeatedly expressing himself very strongly of the opinion that the most effective way to avoid state medicine is for the component societies to act as a unit in handling all problems of indigency and semi-indigency, whether dealing with county paupers or objects of private charity. Dr. Parker ably cites several county societies who have apparently found the solution of this problem by simply avoiding the paternalistic pauper program and definitely seeking to make such persons and families self-supporting members of the community. With this point of view in mind, the necessary medical and surgical services should be of the highest type.

The system described is a contractual one between the medical society and the county officials. This may be but an elementary factor, but is indicative of the trend, if physicians are to be accorded consideration in regard to the practice of medicine. As a body, therefore, let us not stand aside, but let us take part in these different changes in a changing world and seek to guide them into their proper channels, as it would be much better for the physicians to arrange and direct the practice of medicine than to have an organization run by laymen.

The public is very much alive to the question of medical treatment, and especially medical treatment to that great group between the rich and the very poor. The well-to-do have an adequate reserve to meet the expenses of medical treatment, while the indigent, in accordance with tradition, receive practically free treatment in clinics and wards, but the problem is prevalent in practically all of the great hospitals as regards those people who are neither rich nor poor, and are between the upper and lower stones of the mill. They are seldom prepared to meet the sudden and high cost of serious illness, and they are unwilling to accept, and often would be ineligible to receive, charity treatment.

Magazine and newspaper writers have discussed this subject frequently from a layman's standpoint, and medical journals have considered it professionally. An experiment now in the process of attempting to solve this problem, is the new Baker Memorial[8] of the old Massachusetts General Hospital, which enters into a new field of definitely limiting doctors' fees and hospital charges. It is an experiment in standardizing medical costs. The medical profession, the sociologists, and the economists are watching it with eagerness. It is the thought that if state medicine is anything, it comes closer to being standardized medicine than otherwise.

(To be concluded in the next issue)

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FREE LIST OF MEDICAL MOTION PICTURES

The extent to which motion pictures are already serving the medical profession, as well as lay audiences interested in the study of physiology and health and hygiene subjects, is revealed by an interesting survey, entitled "Medical Films and Their Sources."

Over 450 titles comprising 538 reels of 16 mm. safety film are listed and described. Definite information is also given as to where the films may be obtained, with the rental or purchase price asked by their owners or distributors. Separate classifications list medical and surgical films intended for professional use exclusively, health and hygiene films for lay audiences, and similar films obtained from university extension divisions and intended primarily for school use. A special supplement lists dental and oral hygiene films.

Copies of this survey may be obtained, without charge, by any medical school or society; by hospitals and public health authorities; by any active practitioner; or by educators or school administrators interested in the use of motion pictures in the field of health and hygiene. Applications should be made direct to Educational Department, Bell & Howell Company, 1801 Larchmont Avenue, Chicago.

TWENTIETH ANNUAL MEDICAL CLINIC
NOVEMBER 20 AND 21
UNIVERSITY HOSPITALS, IOWA CITY

The Annual Clinics of the Medical College of the State University of Iowa will be held on November 20th and 21st. The success of the clinics last year indicated that the autumn season is appropriate for these meetings. Those expecting to attend the Clinics this year are urged to notify the Dean's office promptly of their intention.

On Saturday, November 21st the Northwestern-Iowa football game will be played. For good seats, reservations should be made early.

Assistance in making hotel reservations or in securing seats for the football game will be given by those at the Medical College.

The JOURNAL of the Iowa State Medical Society

ISSUED MONTHLY

RALPH R. SIMMONS, Editor.....Des Moines

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ON THE REPORT OF THE COMMITTEE ON MEDICAL EDUCATION AND HOSPITALS

One of the most important undertakings in which the Iowa State Medical Society has engaged is that of the Committee on Medical Education and Hospitals. The 1929 House of Delegates by unanimous vote created this committee, and outlined its work in a resolution which definitely set forth the scope of its investigation. The personnel of the committee was chosen by the Council and consisted of Drs. B. L. Eiker, chairman, A. W. Erskine and A. V. Hennessy.

The committee was created as a fact-finding commission, spent eighteen months in investigating and collecting data, and reported to a special meeting of the House of Delegates called for that purpose December 17, 1930. The task of the committee specifically was to gather all possible information concerning the operation of the Perkins, Haskell-Klaus law as affecting the University Hospital, medical education, the indigent of the state, the welfare of the profession and the interests of the Iowa taxpayer. The necessity for such an impartial fact-finding commission arose from constant discrepancies in the statements and evidence submitted in legislative hearings and elsewhere by the two groups interested in the Perkins, Haskell-Klaus law and the University Hospital. The biennial necessity of state appropriations for the University Hospital and the fact that in both the Forty-Second and Forty-Third General Assemblies legislation had been proposed which would modify the Perkins, Haskell-Klaus law, had forced the Iowa State Medical Society and particularly the Committee on Public Policy and Legislation to take a position in these matters. With the viewpoint of the opposed parties so divergent and with the evidence submitted in such conflict, the Committee on Public Policy and Legislation appealed to the House of Delegates for help in securing complete data which could be accepted not only by the legislature but by all parties to the controversy, as unbiased, reliable and complete.

The extensive report of this committee has been made to the House of Delegates and distributed freely to members of the state society and to others upon request, and the eighteen factual findings printed in the summary and conclusions of the committee's report must be assumed to be so well known to members of the society that repetition is not required at this time. Obviously, the report of the committee and the submission of its findings and data to the House of Delegates was but the first step in making its work serve the people of Iowa and the profession. Accordingly, the House of Delegates of 1931 adopted a very definite program for securing from all persons or organizations having an actual and active interest in the operation of the Perkins, Haskell-Klaus law, the University Hospital and the Medical College, their suggestions for amendment and modification of the Perkins, Haskell-Klaus law. These proposals are to be published in the JOURNAL, to be made the subject of further and free discussion, and finally, to be formulated by the House of Delegates into concrete legislative proposals to be sponsored by the Committee on Public Policy and Legislation. Definite progress on this program is being made and there is every reason to believe that if the various interests concerned with this law and the hospital and medical college continue to cooperate, there will result favorable and constructive legislation in the Forty-Fifth General Assembly in 1933.

It is difficult to over-estimate the importance of well considered, sound, constructive action by the Iowa State Medical Society in this vital matter. In fact, the danger is that some members of the state society may not give full recognition to its importance. In this problem are of course involved general issues of great concern politically and economically in which every taxpayer, legislator and state official has a vital concern. From the viewpoint of the medical profession, however, the problem goes much deeper. On the one hand continued efficient operation of the College of Medicine of the State University of Iowa depends upon an adequate supply of the proper type of clinical teaching material. On the other hand, the entire future of medical practice as now constituted depends upon the maintenance of free opportunity for the private practice of that profession. Certainly an unlimited and ill-defined extension of hospital clinical facilities to non-charity patients opens the road toward state medicine. The experience in other states where the situation is some-

what similar, demonstrates the fact that this danger does exist and that the only satisfactory solution is to be found in an intelligent and cooperative effort on the part of all concerned to find some means of operating the University Hospital so that it will be furnished an adequate amount of the proper type of clinical material provided by patients who are properly state charges and in such a way that the tax burden be equitably distributed.

It is quite possible in view of the foregoing considerations that the members of the medical profession in Iowa, the College of Medicine and the University Hospital and especially the law makers of the state, are without clearly appreciating it, at an important crossroads. Certain it is that if the future of medical practice and the standards of medical education are to be preserved, the immediate path must be chosen with care and foresight.

One of the prime requisites for proceeding with care and foresight is that good judgment and a high degree of unanimity should prevail. County officers concerned with this problem, the authorities at Iowa City and especially the Board of Education, as well as members of the Legislature, have shown every disposition to cooperate and work together constructively toward a satisfactory solution of this problem. Most of the members of the Iowa State Medical Society have readily responded to all requests for information, advice and suggestions. A questionnaire sent to every member of the state medical society was answered and returned by nearly one thousand members. While it is true that a few members of the society waited until after the committee had made its report to bring in minority returns and that in one or two quarters attacks have been made upon the committee and the necessary expenses incident thereto, yet on the whole there is every indication that the Iowa State Medical Society will present a united front in this matter.

THE ROSS AWARD FUND OF AMERICA

The building of the Panama Canal is without doubt the most spectacular triumph of modern sanitation. Following the opening of the Suez Canal in 1869, the French, under Ferdinand de Lesseps, began the construction of a tidal level canal through Panama. Adequate money was assured and engineering skill at hand for the successful completion of the project. Insect borne diseases (yellow fever and malaria), however, defeated engineering skill and the project was abandoned by the French company after thousands of lives had been sacrificed and millions of dollars spent.

When the project was undertaken by the United States under the able direction of Colonel George Goethals of the U. S. Army, profiting by the experience of the French, his first move was to rid the Canal Zone of disease. He obtained the services of Major William C. Gorgas, who by his brilliant work in Havana had rendered that city free from yellow fever for the first time in one hundred and fifty years. Gorgas transformed the Canal Zone from the "White Man's Grave" into a habitable area where Goethals concentrated a working force averaging some forty thousand men for a period of ten years, bringing the project to a glorious conclusion in 1914 when the completed Canal was thrown open to traffic.

Back of this great achievement lies a story, less spectacular, less well known, but none the less brilliant. As Lister made possible a Jenner, so Ross made possible a Gorgas. Sir Ronald Ross, some six years before the United States engaged in the building of the Canal (1897-98), brought to a conclusion a series of painstaking observations concerning the etiology of malarial fever and conclusively established the causative role of the mosquito in the spread of the disease. He demonstrated the life cycle of Laveran's plasmodia and developed methods for the extermination of the Anopheles mosquito, which he successfully employed in eradicating malaria from the West Coast of Africa (1902). In recognition of the brilliancy and thoroughness of these studies in the etiology and epidemiology of malaria and in further recognition of his tremendous boon to mankind, Sir Ronald was awarded the Nobel prize in 1902. Two years later when the American work began in Panama, malaria was preventable and by analogy yellow fever was controllable. Consider, if you will, what this great discovery has meant to modern civilization. Millions of lives have been saved, tropical lands made habitable, commerce fostered, industry favored, and prosperity for millions assured. To this great scientist, what has his discovery brought—an enviable position among the elect of scientific pioneers, a satisfaction in the successful conclusion of a most interesting study and a knowledge of a great contribution to human welfare and happiness. Sir Ronald is rich, indeed, in honors, but poor in purse. In his seventy-fourth year of life and crippled by paralysis, he still finds it necessary to labor for his daily bread. He has cheerfully accepted the dictum, "Science is its own reward," and has made his discoveries freely available at all times without thought of monetary reward. Even now, when bowed down by the stress of many busy years of service to humanity, he asks no favors. His many friends in England and

America, however, appreciating his present pecuniary position, have initiated a movement to create a fund for his use during the remaining years of his life so that he may enjoy the rest from labors and the comforts appropriate to his age and station.

The trustees of the Ross Award Fund of America include: Sir James Barr, Hindhead, Surrey, England, Chairman, Ross Award Fund, England; Frederick L. Hoffman, LL.D., Consulting Statistician, Prudential Insurance Company of America, Newark, New Jersey; Dr. Thomas McCrae, Professor of Medicine, Jefferson Medical College, Philadelphia; Dr. Joseph McFarland, Professor of Pathology, University of Pennsylvania; Dr. Francis R. Packard, President, College of Physicians of Philadelphia; Dr. Damaso de Rivas, Professor of Parasitology, Graduate School of Medicine of University of Pennsylvania; Dr. Victor Robinson, Professor of History of Medicine, Temple University, Philadelphia; Dr. Theobald Smith, Princeton, New Jersey; Dr. Robert L. Pitfield, Fellow of the College of Physicians, Secretary.

Contributions should be sent to the Secretary, 5211 Wayne Avenue, Germantown, Pennsylvania.

TO INVESTIGATE "EYE-LOAD" OF SCHOOL CHILDREN

Much information has been secured during the past decade relative to impairments of vision present in school children which because they lack the gross characteristics of marked visual impairments have remained undetected and in many cases have led to the assumption that such a handicapped child is mentally retarded or deficient.

An extensive program has been developed by the National Society for the Prevention of Blindness to determine ways and means of detecting visual impairments of minor degree, methods of correction of such defects, and the adjustment of the school curriculum to meet the needs of such children. In conjunction with the Teachers College of Columbia University and the staff members of the Department of Ophthalmology in the Medical School, the Society planned to undertake a comprehensive study of eye strain in school children.

In their preliminary survey they note that, "Educators are seriously concerned over the fact that children spend a large proportion of their school time in work demanding close careful eye work, as in reading and writing. Yet, there has been no investigation made heretofore on the possibilities of reducing this so-called 'eye-load.'

"In most schools there is no standardization of lighting and seating arrangements; the printed materials with which the children work may vary from very large print to very small print; and, in many instances, the vision of the pupils frequently does not receive even a cursory examination.

"Among the things we wish to learn are: How much time ought a child with normal vision to spend in reading? Which materials would cause him least fatigue? Which materials are best suited to children with eye defects? Ought children of five and six years of age to engage in close eye work? What kind of lighting is best suited to the varying age levels of readers? What degree and intensity of lighting is best?"

The proposed plan of research recognizes the complexity of the problem. The extensive research will extend over a period of several years, and it will be necessary to engage educators, ophthalmologists and illuminating engineers.

It is expected that the results obtained from this investigation will justify a readjustment of school procedures related to the use of vision. For instance, one size of type may be advantageous under a certain kind of lighting, but another type may be better under different lighting conditions.

Four factors seem predominant in the problems: (1) the vision of the child; (2) the lighting conditions under which he works; (3) the materials he uses; and (4) the length of time he uses them. A program of research which takes into consideration among other factors these four predominant factors should eventually produce practical results that will lead to sound educational practice.

The entire medical profession will be interested in the research program of this organization, realizing as we do that the eyes as windows to the mind frequently handicap a school child to the point of defeating the educational program offered and in many cases seriously handicapping his entire career. The National Society for the Prevention of Blindness located at 450 Seventh Avenue, New York City, will be glad to correspond with any physician interested in problems of sight conservation and will upon request release to reputable physicians data upon many phases of eye impairment of which they have made special study.

IOWA PHYSICIAN HONORED

Dr. Gordon F. Harkness of Davenport, a member of the Board of Trustees of the Iowa State Medical Society, was named one of the vice presidents of the American Academy of Ophthalmology and Otolarngology, at the annual meeting held recently in French Lick, Indiana.

Dr. Harkness was on the program of the Academy session, presenting a resumé of progress during the preceding year, "Medical and Surgical Treatment of Ear, Nose and Throat."

THE OPEN FORUM

Law Requires Title M.D.

Dr. R. R. Simmons:

Enclosed is an inquiry for the "Open Forum." It might be of interest to more than myself to have appended the opinion of the Attorney General in regard to the use of titles. If the law means what it says it ought to help along the return of good times for the stationer, printer and sign painter.

Why should the reputable physician worry about what the other fellow calls himself? His honorable title, Doctor, has come down through the ages and is synonymous with extensive and expensive preparation for his high calling and with earnest application and honest endeavor. He would not betray his patient's trust.

The important thing is neither the prefix nor the suffix, but the *man* who uses either or both and what he does, or pretends to do, and how he was prepared to assume such responsibility.

Yours very truly,

E. E. Munger, M.D.

To the Editor of the Journal Iowa State Medical Society:

Under date of June 9, 1931, a circular letter was received from Thomas A. Burcham, M.D., Chairman of the Committee on Public Policy and Legislation, calling attention to new laws affecting medical practice. House File No. 225 provides that "Any person who falsely holds himself out by the use of any professional title or abbreviation, either in writing, cards, signs, circulars, or advertisements, to be a practitioner of a system of the healing arts other than the one under which he holds a license or who fails to use the following designations shall be guilty of a misdemeanor and shall be fined not less than twenty-five dollars ($25.00), nor more than one hundred dollars ($100.00), or be sentenced to thirty (30) days in jail."

A physician or surgeon *may* precede his name with the title "Doctor" and *shall* add after his name the letters "M.D." An osteopath or osteopathic surgeon, chiropractor, dentist, podiatrist and optometrist *may* use the prefix doctor, but *shall* add after his name, letters designating his particular (or peculiar) system of the healing arts.

No restriction is placed on the doctor of veterinary medicine, presumably because his patients actually are "too dumb to understand." It may be presumed that the intent of this law is to enable people to be advised as to just what kind of a doctor they are about to repose confidence in and into whose hands they are about to place their health, lives and pocketbooks. Such a law does not reflect the low percentage of illiteracy, nor does it suggest the high intelligence of Iowa's average citizens.

Having graduated with the degree of Doctor of Medicine one may be modestly proud of the title "Doctor;" offense may not be taken even at the friendly salutation, "Good-morning, Doc." Why not a law prescribing "Good-morning, So-and-So Medicinae Doctoris?" Why not enact a law with fine or imprisonment, or both, for the itinerant who masquerades as "Professor High Pressure?" Why not court martial and shoot at sunrise the auctioneer who appropriates to himself the title of "Colonel?"

For more than thirty-three years I have had signs on my office windows "Doctor Munger." On my letterheads preference has been given to Elbert Ervin Munger, M.D., as evidenced above. In signing my name to correspondence, except on rarest occasions, the suffix "M.D." has not been used. Must I change these signs and long-time habit or go to jail? One wonders if one really *shall* remove "Doctor" before one's name and place after it "M.D." It would grate on the sensibilities of one's intellectual friends to use both the prefix, which he *may*, and the suffix, which he *shall*. In this time of strain and stress, propaganda and promotion, did the sign painters have anything to do with the enactment of this law?

The penalty clause arouses anxiety; one might possibly raise the $25.00 fine, but when one has to depend for his living on patients whose income is from 33-cent corn, 11-cent oats and 10-cent eggs, a $100.00 fine would be quite impossible; thirty days in jail would be rather disagreeable in view of crowded conditions in our city bastile, where often inmates have to double up, and where scabies and lues are not unknown.

Interest would attach to the history of this legislation. For a very long time "Doctor" has been an honorable title, meaningful or meaningless, depending somewhat, of course, on whether it has reference to Doctor of Medicine, Doctor of Divinity, Doctor of Laws, Doctor of Dental Surgery, Doctor of Philosophy, Science, Literature, Music, Social Science, etc., or to a doctor of simon-pure-buncombe. The title is ours, and this is common knowledge, by right of acquirement and by right of inheritance from a distinguished ancestry.

While the law may be compared to a skull and cross bones, or to the cross arms at a railroad crossing, no amount of signs or statutory requirements, however much they may signify danger, will keep everybody from taking a chance with poison or driving into or in front of moving trains. On the other hand it abrogates an inalienable right and enables the tail to wag the dog.

E. E. Munger, M.D.

Pocahontas County Resolutions

At a called meeting of the Pocahontas County Medical Society in Pocahontas August 28, 1931, the following resolutions were unanimously adopted:

I. We recommend to the Legislative Committee of the Iowa State Medical Society that they urge the

(Continued on page 588)

SPEAKERS BUREAU ACTIVITIES

POST-GRADUATE WORK

The unprecedented success of the post-graduate work offered by the College of Medicine and sponsored by the Speakers Bureau last winter is being duplicated this fall. On September 15, at Leon, the second circuit of extension courses under the direction of the Bureau was started. Many requests were received from doctors in those localities where the post-graduate courses were held last year, expressing their interest in registering for further work. In trying to reach as many doctors as possible, however, it was decided to first fill requests from centers which were not included in the first circuit. The circuit this year covers the western part of the state.

The courses this year are devoted to the consideration of surgery for the general practitioner and cardio-vascular diseases. Two hours each week are spent on each subject, over a period of ten weeks. The circuit opens on Monday at Leon and continues on Tuesday at Red Oak; Wednesday at Sioux City; Thursday at Sheldon; and Friday at Boone.

While final reports have not yet been turned in, word has come that there is a minimum registration of 35 physicians at each center, making a total of about two hundred men who are taking this opportunity to keep in touch with progressive medicine.

With the ever increasing store of medical knowledge, post-graduate work is a necessary step in a successful medical career. The plan of bringing the lecturers to the physicians is rather an innovation and the Speakers Bureau in sponsoring such a project is working along pioneer lines. Wherever such work has been offered, it has proved highly successful and interest in the details of the plan is growing throughout the country. Undoubtedly it will eventually become an integral part of every medical or state educational program.

The medical profession of Iowa is deeply indebted to the College of Medicine for this opportunity. Only through the cooperation of the dean and his faculty is it possible for Iowa physicians to take these courses. With their decreased appropriation it has meant a real sacrifice both on the part of the Medical College and a personal sacrifice of time on the part of each of the lecturers.

BUREAU PLACEMENTS

During the past two months, seven county medical societies have held chest clinics as their regular monthly meetings: Adams, Buena Vista, Decatur, Floyd, Lee, Winnebago and Kossuth. In addition to the clinics, which were held in the afternoon, the members and guests enjoyed dinner together, and that was followed by medical programs on diseases of the heart and lungs, presented by the clinicians. Those who participated in these clinic meetings were: Doctors J. H. Peck, Des Moines; D. J. Glomset, Des Moines; C. B. Luginbuhl, Des Moines; H. W. Rathe, Iowa City; W. M. Spear, Oakdale, and W. L. Bierring, Des Moines.

The Bureau helped with the arrangements of several other county society meetings. On August 27, Robert L. Parker, M.D., Des Moines, and A. W. Erskine, M.D., Cedar Rapids, presented a program on "Therapy" before the Calhoun County Medical Society at Rockwell City. "Bright's Disease" was the topic discussed before the Franklin County Medical Society by H. P. Smith, M.D., Iowa City, and D. J. Glomset, M.D., Des Moines. To the Jackson County meeting on September 17, Doctors F. R. Peterson and H. M. Korns of Iowa City, gave a symposium on Peptic Ulcer and R. R. Harris, M.D., of Dubuque, spoke on "The Treatment of Injuries to the Hand." The Webster County Medical Society on September 22 had Dr. Robert L. Parker of Des Moines, give his talk on "Use of Drugs in Therapy." On September 25 Walter D. Abbott, M.D., Des Moines, gave an illustrated talk on "Head Injuries" before the Keokuk County Medical Society. Roy O. Hughes, M.D., and Raymond Johnson, M.D., of Ottumwa, held a pediatrics clinic for the September meeting of the Appanoose Medical Society. At the meeting of the Hardin County Medical Society on September 29, Dr. H. E. Kleinberg, of Des Moines, spoke on "Office Gynecology."

Speakers were sent to three lay meetings. Dr. Fred Moore, of Des Moines, spoke at the meeting of the American Legion Auxiliary in Marshalltown on "Child Health and Protection." Granville N. Ryan, M.D., Des Moines, addressed the Canopus Club of Des Moines on "The Handicapped Child." On September 28, the Webster City Woman's Club heard a talk on "Building for Health" by D. J. Glomset, M.D., Des Moines.

CANCER DATA AVAILABLE

Notice has recently come from the American Society for the Control of Cancer that they have many booklets giving the correct information on cancer, its prevention and treatment which will be sent out to the laity as well as to members of the medical profession in single copies or in quantities. These pamphlets deal with such subjects as "Prevention of Cancer," "What Everyone Should Know About Cancer," "The Doctor and the Cancer Patient," "Cancer Mortality Statistics," etc. Anyone desiring some of these pamphlets or additional information in regard to them should address their inquiries to the Speakers Bureau.

If any county society wishes to have a cancer meeting, the Bureau will be glad to help with the arrangements.

SOCIETY PROCEEDINGS

Black Hawk County

The Black Hawk County Medical Society held a meeting, Tuesday, September 1, and devoted the entire evening to a discussion of local and state health problems. The principal speaker was Mr. George N. Lyman, Des Moines, of the law enforcement division of the state department of health, who discussed Enforcement of the Medical Practice Act. Dr. Channing G. Smith, president of the state society, and Vernon D. Blank, managing director, were present and discussed the activities of the Iowa State Medical Society.

Bremer County

Tuesday, September 15, the members of the Bremer County Medical Society were guests of the Bremer County Bar Association at a dinner served at the Fortner Hotel, Waverly. After the dinner, various talks and toasts were given. Professor A. W. Swenson was the speaker of the evening and delivered an address on Chemistry as Applied to Life.

Cerro Gordo County

The Cerro Gordo County Medical Society held its regular meeting in the Park Hospital, Tuesday evening, September 15. After a brief business session, the following program was presented: Allergical Hypothesis of Scarlet Fever, Hale F. Shirley, M.D.; Lateral Sinus Phlebitis with report of cases, C. E. Chenoweth, M.D., and Activities of the Board of Councilors of the Iowa State Medical Society, L. R. Woodward, M.D., Chairman of the Council.

T. E. Davidson, M.D., Secretary.

Des Moines County

The first fall meeting of the Des Moines County Medical Society was held Tuesday, September 8, at the Mercy Hospital in Burlington, and was devoted to a discussion of national preparedness and reserve officers training. Dr. E. I. Woodbury, commanding officer of the 65th Evacuation Hospital, was in charge of the program.

Dubuque County

The Seventy-eighth Anniversary Session of the Dubuque County Medical Society was held at Dubuque, Tuesday, September 8. The meeting opened at 1:30 p. m. with an address of welcome by the president, Dr. J. Carl Painter, and was followed by an address, Allergy as Related to General Medicine, by W. W. Duke, M.D., of Kansas City. The next paper on the program was Surgical Treatment of Pulmonary Tuberculosis, by Jerome H. Head, M.D., of Chicago, after which H. H. Webb, M.D., of Dubuque, presented a lantern slide demonstration of the Use of Uroselectan. Consideration of Fractures and Periarticular Deformities, was the subject of an address by Arthur Steindler, M.D., of Iowa City, and the session closed with the presentation of Six Unusual Pediatric Cases with Pathologic Studies, by Drs. W. A. Henneger, C. C. Lytle and F. P. McNamara, all of Dubuque. Dr. H. G. Langworthy was in charge of the program.

Floyd County

Following an afternoon clinic and six o'clock dinner at the Charles City Country Club, Friday, September 4, the Floyd County Medical Society met for an evening meeting. John H. Peck, M.D., of Des Moines, spoke on Childhood Type of Tuberculosis; C. B. Luginbuhl, M.D., also of Des Moines, addressed the society on Cardiac Manifestations Associated with Goiter, and William M. Spear, M.D., of the Oakdale Sanitarium, talked on Early Recognition of Tuberculosis.

Jackson County

The annual September picnic of the Jackson County Medical Society and its County Auxiliary was held at the Riverside Country Club, Lakehurst, near Maquoketa, Thursday, September 17. A twelve-thirty picnic luncheon was served by the Auxiliary, after which each group adjourned to hold its separate meeting. The following scientific program was presented to members of the medical society: Hand Injuries and Their Treatment, Ray R. Harris, M.D., of Dubuque; Symposium on Peptic Ulcer: Medical Treatment, H. W. Korns, M.D., of Iowa City; Surgical Treatment, F. R. Peterson, M.D., of Iowa City.

Jefferson County

A meeting of the Jefferson County Medical Society was held at the Leggett Hotel in Fairfield, Monday evening, September 21. A six o'clock dinner was served to the members and visiting guests which included the members of the board of supervisors of Jefferson county, members of the board of trustees of the Jefferson county hospital, and the superintendent of the hospital. Dr. John I. Marker of Davenport, Chairman of the Committee on Medical Economics, and Dr. C. A. Boice of Washington, councilor for the eighth district, were present and addressed the gathering upon the question of the care of the indigent sick by a county contract. The Jefferson County Medical Society has had such a contract with the board of supervisors for the past three years.

J. S. Gaumer, M.D., President.

Linn County

The regular meeting of the Linn County Medical Society was held at the Roosevelt Hotel in Cedar Rapids, Thursday, September 10, with S. Marx White, M.D., of Minneapolis, president of the Ameri-

can College of Physicians, as the speaker of the evening. Dr. White took for his subject, Subacute Bacterial Endocarditis, and the discussion was opened by Frank Rohner, M.D., of Iowa City and Benjamin F. Wolverton, M.D., of Cedar Rapids. A second feature of the program was a lantern slide demonstration of Diseases of the Hip, by Carl L. Gillies, M.D., of Cedar Rapids.

Thomas F. Hersch, M.D., Secretary.

Madison County Annual Meeting

Monday evening, September 14, members of the Madison County Medical Society met for their regular monthly dinner and meeting at the Winterset Hospital. Dr. Arnold L. Nelson of Winterset introduced Fred Moore, M.D., of Des Moines, who furnished the scientific program, speaking on Some Problems of Diagnosis and Infant Feeding, including the presentation of a case. At the business meeting the following officers were elected for next year: Dr. W. H. Thompson of Winterset, president; Dr. C. M. Wallace of Winterset, vice president; and Dr. C. B. Hickenlooper of Winterset, secretary and treasurer.

C. B. Hickenlooper, M.D., Secretary.

Pocahontas County Annual Meeting

Election of officers for the Pocahontas County Medical Society held Friday, August 28, resulted as follows: Dr. H. C. Lawson of Rolfe, president; Dr. B. A. Smillie of Gilmore City, vice president; Dr. J. C. Riordan of Pocahontas, secretary and treasurer, and Dr. W. W. Beam of Rolfe, delegate.

Polk County

Regular meetings of the Des Moines Academy of Medicine and Polk County Medical Society were resumed Tuesday evening, September 29, 1931. The meeting was held at the Smouse School for Handicapped Children at the kind invitation of Mr. J. W. Studebaker, superintendent of schools, and the school board.

Arrangements for the meeting were made by Miss Bess Johnson, principal of the school, the teaching staff, and members of the health department. The school was opened for inspection at 7:30, at which time demonstrations were held in various classrooms. Classroom work in Instruction of Deaf Children, Conservation of Vision, Physiotherapy and Manual Training, were the subjects of the demonstrations.

After calling the meeting to order, President Holbrook read a telegram from Doctor Smouse expressing his pleasure in knowing that the medical society was to meet at the school. Doctor Smouse further commended the medical profession and the teaching profession for their cooperation in improved child health and educational work.

The program opened with impromptu talks by Superintendent J. W. Studebaker and Principal Bess Johnson. James A. Downing, M.D., discussed Instruction of Deaf Children from the Otologist's Point of View; Harold J. McCoy, M.D., spoke on Conservation of Vision from the Oculist's Point of View; W. Eugene Wolcott, M.D., took for his subject, Benefits of the School for Crippled Children; E. Parish Lovejoy, M. D., addressed the group on Benefits of the School for the Cardiac Child, and Helen Johnston, M.D., discussed Benefits of the School for Other Types of Children in Attendance. The program was closed by Fred Moore, M.D., who pointed out the value of cooperation between the school and the doctor and requested the aid of the medical profession in making the work of the school most efficient. Two hundred eighty doctors and guests were in attendance.

Poweshiek County

The Poweshiek County Medical Society held its first fall meeting Tuesday, September 15, in Grinnell, at the Community Hospital. E. E. Harris, M.D., explained the psychiatric clinic which has been in operation in Grinnell for three years and has been of considerable value in disposing of many social problems.

Washington County

The annual banquet of the Washington County Medical Society was held at the Y. M. C. A. in Washington, Tuesday, September 1, at six-thirty p. m. After the dinner, Dr. C. A. Boice introduced Mr. Robert E. Neff, administrator of the University Hospitals at Iowa City, who addressed the members of the society, their wives and guests, on the management of the University hospitals.

Webster County

Tuesday, September 22, the first fall meeting of the Webster County Medical Society was held at the Wahkonsa Hotel. The speaker of the evening was Robert L. Parker, M.D., of Des Moines, secretary of the state society. Dr. Parker gave a most interesting and well worth while discussion concerning the use of drugs. There was a great deal of discussion on this paper. The attendance at this meeting was more than satisfactory, as we had a greater percentage in attendance than for some years.

John C. Shrader, M.D., Secretary.

Austin Flint-Cedar Valley Medical Society

The fall meeting of the Austin Flint-Cedar Valley Medical Society was held in Algona, Tuesday, October 6, in honor of Dr. M. J. Kenefick of that city. The tentative program listed the following speakers: Roland Stahr, M.D., of Fort Dodge, Poliomyelitis; George H. Miller, M.D., of Iowa City, Digitalis, Its Therapeutics; Edwin G. Barborka, M.D., of the Mayo Clinic, Rochester, Diet in Health and Disease; R. N. Larimer, M.D., of Sioux City, Simplified Management of Diabetes; D. W. Ward, M.D., of Oelwein, End Results in Fractures; Alfred W. Adson, M.D., also of the Mayo Clinic, Rochester, Injuries of the Head; Edward J. Harnagel, M.D., of Des Moines, Traumatic Appendicitis; F. Harold Entz, M.D., of Waterloo, Calculous Disease of the Urinary Tract, and Lester D. Powell, M.D., of Des Moines, Considerations of Gall-Bladder Disease.

Waterloo Medical Society

At the regular meeting of the Waterloo Medical Society Tuesday, September 15, A. B. Rivers, M.D., of Rochester, spoke on Causes of Gastro-Intestinal Hemorrhages.

AUXILIARY NEWS

Dallas-Guthrie Auxiliary

The Women's Auxiliary to the Dallas-Guthrie County Medical Society met August 12 at the Perry Country Club. After a delicious luncheon together with the members of the Dallas-Guthrie Medical Society, the Auxiliary members adjourned to the large porch and held a business meeting, at which the following officers were elected for the current year: Mrs. P. W. Beckman of Perry, president; Mrs. A. J. Pringle of Bagley, first vice president; Mrs. E. B. Haden of Panora, second vice president; Mrs. W. A. Seidler of Jamaica, secretary, and Mrs. C. O. Thomas of Guthrie Center, treasurer. Mrs. Channing G. Smith of Granger, who is the state president, was present and spoke briefly on the organization and membership of the Auxiliary. Mrs. E. L. Bower gave a short report on the A. M. A. Auxiliary National Convention at Philadelphia, and Mrs. P. W. Beckman spoke on some of the plans for the coming year.

Washington County Auxiliary

The newly organized Auxiliary to the Washington County Medical Society has as its officers: Mrs. C. W. McLaughlin of Washington, president; Mrs. N. J. Lease of Crawfordsville, vice president; Mrs. C. A. Boice of Washington, treasurer, and Mrs. E. E. Blythe of Riverside, recording secretary.

National Convention

The ninth annual meeting of the Women's Auxiliary to the American Medical Association was held in Philadelphia, June 8-12, 1931, with the largest attendance yet recorded. More than fourteen hundred delegates, members and guests were present. It is of interest to know that there are over 12,000 members in good standing. Income for the past year was $5,338 and expenses totalled $3,087.

INTERESTING NEWS

In Brief

The Department of Health created last year at the State University, under the direction of Dr. Milford E. Barnes, proved so successful that administrative officials have announced a continuation of the plan this year. The board supervises water supplies, swimming pools, milk supplies, and general sanitary conditions in all university buildings and food handling establishments serving university students.

The only addition to the faculty of the State University College of Medicine this year with the full rank of professor is Dr. Erwin von Graff, professor in Obstetrics and Gynecology, who for the past twenty years has been connected with the University of Vienna.

The Emmet County Medical Society has endorsed and sponsored the reorganization of a private hospital at Estherville as a public hospital. The institution will be operated on the "Open Hospital" plan of staff.

The third annual convention of the Iowa Hospital Association has been announced for March 9 and 10 at Sioux City. About two hundred delegates are expected to attend this meeting.

A campaign has been launched to raise $100,000 for a new hospital at Spencer. It is the purpose of the hospital board to provide at least fifty beds so that the hospital may operate its own training school for nurses.

Plans have been completed for the establishment of a hospital in Sac City. Promoters of the hospital hope to form a clinic with headquarters in the new hospital.

Iowa's sale quota of penny Christmas seals this year will be 55 million, 10 million more than in any previous campaign.

PERSONAL MENTION

Dr. Sumner B. Chase of Fort Dodge, recently had the honor of being one of seven applicants for membership on the American Board of Otolaryngology to be certified without examination by the examiners in Indianapolis. In a group of over seventy eye, ear, nose and throat specialists, only seven, whose qualifications were known through their work and contributions to medical periodicals were received without examinations.

Dr. A. N. Thoms, formerly of Fort Dodge, has moved to Texas, where he plans to locate and continue the practice of medicine.

Dr. C. W. Howell has arrived in Grinnell to take over the practice of Dr. E. F. Talbott, who is retiring on account of ill health. Dr. Howell comes from Macomb, Illinois, where he has been head surgeon in the St. Francis Hospital. He will hold the same position in the St. Francis Hospital in Grinnell.

Dr. John T. McClintock will be acting dean of the State University of Iowa College of Medicine for the next year while Dean Henry S. Houghton is on leave of absence, visiting India, China and Japan as a member of the Institute of Religious Research.

Dr. L. B. Amick, who has been practicing medicine and surgery in Millersburg for more than twenty years, is moving to Sac City October first, where he will operate a private hospital.

Dr. George D. Callahan, now of Iowa City, will locate in Grinnell in the near future, and engage in the practice of medicine and surgery. Dr. Callahan is a graduate of the University of Iowa College of Medicine and has served his interneship in the Kansas City General Hospital.

Dr. G. F. Parker of Pocahontas discussed the subject of Malta Fever at a community meeting held in Palmer, August 18.

Dr. J. R. Dixon, formerly of Kansas City, has arrived in Centerville to practice medicine and is now occupying the offices of the late Dr. C. P. Tillmont. Dr. Dixon is a graduate of the University of Kansas School of Medicine and served his interneship at Bell Memorial Hospital in Kansas City and the Kansas City General Hospital.

Dr. F. D. Ullrich, who for the past two years has been associated with the Santa Fe Hospital in Fort Madison as assistant surgeon, left recently for Wilmington, California, where he will engage in private practice.

Dr. Jacob Stegman, until September first a member of the staff of the city hospital of St. Louis, has returned to Clinton, and will open an office there. Dr. Stegman was graduated in 1928 from the University of Iowa College of Medicine. Upon completing his interneship at the city hospital of St. Louis, he was added to the hospital staff and has been there up to this time.

Dr. Carl Jordan, director of the Des Moines County Health Unit, gave a talk on how biological products are made, at the regular meeting of the Burlington Rotary Club, August 31.

Dr. F. Harold Entz, who has been acting head of the division of urology in the department of surgery at the University of Chicago during the past year, has established an office in Waterloo. Dr. Entz is a graduate of the University of Iowa College of Medicine, and after completing his interneship there, spent a year doing special work with Dr. N. G. Alcock.

Dr. Herbert J. Witte, formerly of Odeboldt, has located at Marathon, to continue the practice of medicine. Marathon has been without a resident physician since the death some time ago of Dr. Delahunt. Dr. Emory Rust of Webb has been taking care of urgent cases, and was instrumental in getting Dr. Witte to come to Marathon.

Dr. Ted J. Pfeffer, formerly of Rochester, Minnesota, has opened an office in DeWitt. Dr. Pfeffer received his medical degree from the University of Iowa College of Medicine in 1926, spent a year as an interne in St. Margaret's Hospital, Kansas City, and for the past four years has been with the Mayo Clinic in the departments of diagnosis and internal medicine.

Dr. M. B. Galloway addressed the Webster City Kiwanis Club Thursday evening, September 10, on "Why the Quack Gets Away With It."

Dr. Julius Moskovitz has disposed of his practice in Missouri Valley to Dr. A. C. Bergstrom and will leave the first of October for Philadelphia, where he will continue his professional education at the University of Pennsylvania. He plans to specialize in obstetrics and gynecology. Dr. Bergstrom comes directly from Detroit, where he has just finished a two years' interneship at Harper's Hospital.

Dr. Paul W. Schriber of Eau Claire, Wisconsin, has definitely decided to locate in Elgin, and has settled there with his family. Dr. Schriber has had special work in obstetrics and children's diseases. Prior to coming to Elgin, he was doing industrial work at the hospital in Parsons, Kansas.

Dr. William Jepson and Dr. J. N. Lande, both of Sioux City, addressed the Five County Medical Society of Nebraska at the annual session of that organization held at Norfolk, Nebraska, September 8. Dr. Jepson addressed the group on "Cancer and Its Prevention," while Dr. Lande spoke on "Care and Management of Premature Infants."

Dr. E. A. Nash, formerly of Lone Tree, has located at Greeley, where he will continue in the practice of medicine.

MARRIAGES

Miss Ada Hemingway, of Clinton, and Dr. G. G. Henning of Iowa City, were married at the home of the bride, Saturday, August 22. Dr. Henning is a recent graduate of the College of Medicine, University of Iowa, and is now resident physician at the Children's Hospital in Iowa City, where the young couple will make their home.

Thursday, October 1, Miss Margaret Marten of Burlington, and Dr. Frank Mehler of New London, were married at the home of the bride's mother. Mrs. Mehler has been a supervisor at the Burlington Hospital for the last five years, and Dr. Mehler, who was graduated this June from the State University of Iowa College of Medicine, is practicing in New London.

DEATH NOTICES

Waggoner, Melancthon R., of DeWitt, died September 9 at the age of fifty-seven, as the result of a sudden heart attack. He was graduated in 1896 from Hahnemann Medical College and Hospital, Chicago, and had been a member of the Clinton County Medical Society.

History of Medicine in Iowa

Edited by the Historical Committee

Dr. William Jepson, Sioux City
Dr. Arthur D. Woods, State Center
Dr. Frank M. Fuller, Keokuk
Dr. Walter L. Bierring, Des Moines
Dr. Norman F. Miller, Iowa City

Fee Bills—Old and New

Recently a number of old fee bills have come into the possession of the Iowa State Medical Library which have distinct historical interest, particularly for comparison with fee schedules in use in Iowa today.

The following fee bill of the Page County Medical Society was presented by Dr. G. T. Rumbaugh of Villisca with the note, "I think this fee bill was adopted about 1875. I remember seeing it hang in the office of my father, Dr. G. H. Rumbaugh, who died in 1892. Of the list of names I knew nine personally, all are now dead." Dr. G. H. Rumbaugh came to Page county, Iowa, in 1857.

FEE BILL
PAGE COUNTY MEDICAL SOCIETY

Visit to patient in town	$ 1.50
Each additional visit same day	1.00
Visit patient one mile in country	2.00
Each additional mile over one	.75
For Prescrip. each additional patient same house	1.00
Night visits 25 per cent extra	
Obstetrical Cases in town and within four miles	10.00
Over four miles, mileage added at regular rates	
Difficult Labor, extra charge according to amount of responsibility assumed	
Detention over 4 hours, extra per hour	.50
Instrumental Delivery	25.00
Turning, extra charge	5.00
Delivery of Placenta alone, in town	5.00
In country, mileage added	
Consultation Fee, in town	10.00
In country, mileage added	
Office Prescription not less than	1.00
Protracted and Critical Examinations	$2 to 10.00
Vaccination at office	.75
Vaccination at home of patient, mileage added	
Each additional applicant at same house	.50
Opening Abscesses	50 cts. to 5.00
Gonorrhea, retaining fee	5.00
Subsequent examination and treatment to be charged according to severity of case	
Syphilis retaining fee	10.00
After treatment, charges rated according to severity of case	
Administration of chloroform or other anaesthetics	5.00
Passing Catheter	3.00
In country, mileage added	
Tapping for Hydrocele	25.00
Reduction of Hernia by taxis	10.00
When unusually difficult, extra	10.00
Operation for Reduction of Hernia	$150 to 200.00
Operation for Varicocele	25.00
Stricture of Urethra	30.00
Operation for Fistula in Ano	50.00
Radical cure for Hemorrhoids	50.00
Operation for Lithotomy	150.00
Operation for Lithotrity	100.00
Tapping for Ascites	25.00
Operation for Single Hair Lip	30.00
Operation for Double Hair Lip	50.00
Excission of Tonsils	20.00
Resection of Leg, Arm or Fore-Arm	75.00
Resection of Hip or Shoulder Joint	100.00
Resection of Finger or Toe	10.00
Reduction Simple Fracture Thigh	35.00
Reduction Compound Fracture Thigh	50.00
Reduction Fracture Leg	$25 to 30.00
Reduction Fracture Arm or Fore-Arm	20.00
Reduction Fracture Clavicle	$10 to 25.00
Dislocation Hip Joint	50.00
Dislocation Knee or Ankle	25.00
Dislocation Shoulder	20.00
Dislocation Elbow	30.00
Old Dislocations, extra charge 50 per cent	
Extirpation of Tumorts	$5 to 50.00
Extirpation of Mammary Gland	50.00
Trephining Cranium	100.00
Trephining Long Bones	50.00
Cupping at office	1.00
Amputation Thigh	100.00
Amputation Leg, Arm or Fore-Arm	50.00
Amputation Finger or Toe	10.00
Operation for Polypus, nose or ear	20.00
Operation for Cataract	100.00
Operation for Strabismus, each eye	25.00

G. H. RUMBAUGH, M.D., President.
W. H. VANCE, M.D., Secretary.

MEMBERS

D. Brackney, M.D.	J. L. Barritt, M.D.
E. C. Whiting, M.D.	S. S. Weidner, M.D.
P. W. Lewellen, M.D.	W. H. C. Moore, M.D.
S. H. Kridelbaugh, M.D.	O. W. Spicer, M.D.
M. C. Boggs, M.D.	G. J. Ross, M.D.
J. V. Beghtol, M.D.	E. Eckerman, M.D.
M. Enfield, M.D.	E. K. Bailey, M.D.

J. C. Holmes, M.D.

The following old fee bill of the Poweshiek County Medical Society adopted about 1877-1878 was donated by Dr. E. B. Williams, Montezuma, Iowa:

FEE BILL OF THE POWESHIEK COUNTY MEDICAL SOCIETY

Medical

Prescription at office, in ordinary cases	$ .50 to $1.00
" " " " chronic "	1.00 to 2.00
One Visit in Town	1.50
Two Visits in Town, same day	2.00
Consultation Visit in Town	5.00
Visit in Country, 1 mile	2.00
" " " each additional mile	.50
Examination of Heart or Lungs in chronic cases	2.00 to 5.00

Obstetrics

Natural Labor, in Town	$ 8.00
Preternatural Labor	10.00 to 20.00
Twins	12.00
Instrumental	15.00 to 25.00
Craniotomy	$25.00 to 50.00

Miscarriage same as Natural Labor.
Delivering Placenta same as Natural Labor.
An additional charge of 50 cts. per hour, when detained longer than eight hours.

Surgery

Amputation at Hip Joint	$100.00
" of Thigh	75.00
" " Leg	50.00
" " Foot	25.00
" " Shoulder Joint	50.00
" " Arm	40.00
" " Fore-Arm	30.00
" " Fingers and Toes	5.00
Resection in any case	20.00 to 50.00
Ligation of Arteries	5.00 to 50.00
Reducing Fracture of Thigh	25.00
" " " Leg	15.00 to 25.00
" " " Arm	10.00 to 20.00
" " Fore-Arm	10.00 to 20.00
" " " Clavicle	5.00 to 10.00
" " " Fingers	2.00 to 5.00
Dislocation of Hip	25.00 to 50.00
" " Knee	10.00 to 30.00
" " Ankle	10.00 to 20.00
" " Shoulder	5.00 to 10.00
" " Elbow	5.00 to 10.00

All other Dislocations	1.00 to 5.00
Reducing Hernia by Taxis	5.00 to 10.00
" " " Operation	30.00 to 50.00
Tapping for Hydrocele	5.00
" " Ascites	10.00 to 15.00
1st Prescription for Gonorrhoea	5.00
1st Prescription for Syphilis	5.00 to 10.00
Vaccinating one person in family	.50
" each additional one	.25
Administering Chloroform in Minor Surgery	1.00 to 5.00
Lancing Abscess	.50 to 2.00

☞All Bills considered due when services cease to be necessary.

We whose names are hereto signed, pledge ourselves to be governed by the above Fee Bill, and that we will report to each other the names of a certain class who are able, yet refuse or neglect to pay.

Dr. F. S. McKibben
Dr. Thos. Holyoke
Dr. — — Palmer
Dr. J. C. Tribbet
Dr. E. W. Clark
Dr. E. H. Harris
Dr. A. P. McCulloch
Dr. S. Wilson
Dr. C. D. Conaway
Dr. J. W. H. Vest
Dr. C. E. Rayburn
Dr. J. W. McDowell
Dr. John Conaway
Dr. — — Watts
Dr. V. S. Wilcox
Dr. Geo. E. Barthe
Dr. P. H. Steele
Dr. Thos. M. Hedges
Dr. B. F. Kierulff

At the last meeting of the Iowa State Medical Society, Des Moines, May 12-15, 1931, the Committee on Medical Economics submitted a report to the House of Delegates, which recommended a minimum fee bill to the favorable consideration of each component county society with a view to its adoption.

In the May issue of the JOURNAL appeared a historical review of the Northern Iowa Medical Society, which included a fee bill adopted June 22, 1859. There is also available for comparison a fee bill adopted by the Franklin County Medical Society in 1914. These several fee bills cover a period of 72 years, permitting a comparative estimate of professional services prevailing in Iowa during this period.

	Northern Iowa Medical Society 1859	Page and Powshiek County Medical Societies 1876-1877	Franklin County Medical Society 1910-1914	Medical Economics Committee 1931
MEDICAL				
Office Visit and Prescription	$ .50 to $5.00	$ .50 to $2.00	$1.00 to $10.00	$2.00
Visit in Town	$1.00 to $2.00	$1.50	$2.50	$2.50
Town Consultation	$3.00 to $5.00	$5.00 to $10.00	$10.00	$10.00
Visits Out of Town	Visit fee plus 50 cents mileage	Plus 50 to 75 cents mileage	Plus $1.00 mileage	Plus $1.00 mileage
Visits at Night	Double specified fees	25 per cent extra	$4.00 plus mileage	$5.00 plus mileage
Venesection and leeching	$1.00	.....	.....	.....
Cupping, inserting seaton; issues, etc.	$1.00 to $3.00	.....	.....	.....
Postmortem Examination, Legal Investigation	$10.00 to $25.00	.....	$25.00 to $200.00	$50.00
Vaccination (small pox)	$1.00	$ .50 to $ .75	$2.00	$2.00
Anesthetic service	.....	$5.00	$5.00 to $25.00	$10.00 per hour
Gonorrhoea and Syphilis	$10.00 to $50.00 (in advance)	$5.00 to $10.00 1st examination	....	....
OBSTETRICS				
Ordinary	$5.00 to $25.00	$8.00 to $10.00	$30.00	$35.00
Detention over 4 hours	.....	$ .50 per hour	$3.00 per hour	$5.00 per hour
Instrumental	$10.00 to $50.00	$15.00 to $25.00	$40.00	$50.00
SURGERY				
Amputations; arm, forearm, leg	$40.00 to $100.00	$30.00 to $50.00	$100.00 up	$100.00
" hip or thigh	$40.00 to $200.00	$75.00 to $100.00	$100.00 up	$150.00
" fingers and toes	$5.00 to $20.00	$5.00 to $10.00	$10.00 up	$15.00
" of breast	.....	$50.00	$100.00 up	$100.00 to $200.00
Fracture arm and forearm	$5.00 to $10.00	$10.00 to $20.00	$30.00 to $50.00	$25.00 to $50.00
" leg thigh	$5.00 to $10.00	$25.00 to $50.00	$50.00 up	$100.00
" clavicle	$5.00 to $10.00	$10.00 to $25.00	$25.00 up	$30.00
Dislocations, ankle, shoulder, wrist	$10.00 to $20.00	$10.00 to $20.00	$25.00 up	$25.00
" elbow, hip, knee	$10.00 to $100.00	$25.00 to $50.00	$50.00 up	$35.00
Reducing hernia (taxis)	$5.00 to $10.00	$5.00 to $10.00	$5.00 to $15.00	.....
Opening large abscesses	$5.00 to $10.00	$ .50 to $5.00	$1.00 to $20.00	$3.00
Tapping—hydrocele	$5.00 to $10.00	$5.00 to $25.00	$5.00	$5.00
Herniotomy	.....	$30.00 to $200.00	$100.00 to $150.00	$100.00
Hemorrhoids	.....	$50.00	$50.00 to $100.00	$75.00
Strabismus	$20.00 to $50.00	$25.00	.....	$100.00
Hair lip	$30.00 to $50.00	$30.00 to $50.00	$50.00 up	.....
Cleft palate	$30.00 to $60.00	.....	$75.00 up	.....
Cataract	.....	$100.00	$100.00 up	$150.00
Excision of tonsils	.....	$20.00	$50.00	$30.00

The rapid progress of medical knowledge has brought great changes in the character of medical and surgical practice, so that the fee bill of today contains many more items or types of service.

Different specialties which had no part in the older schedules, are a prominent feature in the fee bills of today.

The disparity between medical and surgical fees is noticeable in all the schedules. Surgical or operative treatment added an unusually large part to the patient's expense in former fee bills as it does at the present time.

With changing economic conditions the question arises whether it is wise or just to have such fixed charges for professional services. As stated so well by Dr. Olin West, the Secretary of the American Medical Association, "The one great outstanding problem before the medical profession today is that involved in the delivery of adequate, scientific medical services to all the people, rich and poor, at a cost which can be reasonably met by them in their respective stations in life."

It is generally recognized in all forms of medical practice that the total cost of professional care must be adjusted in accordance with the dictum above set forth. In such an adjustment equitable compensation for all services rendered must be maintained.

The legal right of physicians to decide the prices which they are to charge for their services has been questioned only once in the history of Iowa medicine. This arose out of the antagonism engendered by Representative Miller of Bremer County in 1907-08 against the physicians of Waverly and Bremer County, and the activities of licensed physicians in general. The agreement on a medical fee bill was claimed to be in conflict with Section 5060 of the Iowa Code, and that physicians were members of a trust. At the insistence of Editor and Legislator Miller the Grand Jury indicted practically all the members of Bremer County Medical Society for this offense. It was dismissed by the District Court, and the case was then appealed to the Supreme Court. The decision of this higher Court was written by Judge Deemer, and expressed in no uncertain terms, that a man or body of men may charge what they please for their services. Quoting from the decision "labor is not a commodity within the meaning of the act in question." "It seems to be the almost universal holding that it is no crime for any number of persons, without an unlawful object in view, to associate themselves together and agree that they will not work for or deal with certain classes of men or work, without a certain price or without certain conditions." This suit attracted a great deal of attention at the time, causing great annoyance to the physicians involved, but the profession of the state rallied nobly to their support and in establishing the issue involved, made the contest well worth while.

A few years later the instigator became critically ill with a malignant disease, and one of the leading physicians of Bremer County attended him during his last illness.

W. L. B.

PETER JOOR, M.D.
1858-1931

When the last call came to Dr. Peter Joor of Maxwell, Iowa, on August 19, 1931, there passed from the stage one of the medical veterans of the prairie, a graduate of the Medical Department of the State University of Iowa in 1881, thus completing a practice of fifty years in a rural community.



Among the new members admitted to the Iowa State Medical Society at the Council Bluffs meeting in 1884 appears the name of Dr. Peter Joor, and ever since he had been a faithful attendant at medical meetings.

He was representative of that fine type of "family doctor" that is rapidly passing into history. In constant touch with medical and surgical progress, he gave to his community the benefit of his knowledge and the comfort of his seasoned advice and counsel.

During twenty-five years of his life he was a member of the local board of education, and a

greater portion of this time its presiding officer. As the organizer of the Maxwell Public Library and active member of the Maxwell Men's Chorus he contributed in a large measure to the cultural development of his community.

When a patient called by appointment at ten o'clock on Wednesday forenoon, August 19th, he was seated in the old office chair with his feet up on a stool, the morning paper lying on his lap, composed as if in sleep, but the heart was stilled, and the spirit had passed to the beyond. In the terms of Osler when referring to angina pectoris and coronary artery disease, "No form of death so placid, so peaceful, and so much to be envied, as it probably is without a pang." It may also, have been in John Henry Newman's mind when he penned the lines describing the death of his mother,

"One moment here, the next she trod
The viewless mansions of her God."

As a practitioner his energy and endurance was the marvel of his friends and colleagues. There was no road too rough nor hour too late for him to answer the call of the sick. The day preceding the end he was a visitor in Des Moines and seemed as active and full of vigor as ever.

Our friend left the deepest impression in our memories of a fine noble character, of a rugged exterior, but with the warmest heart within.

Walter L. Bierring, M.D.

PETER JOOR, M.D.

An Appreciation

Peter Joor was born on a farm southeast of Nevada, February 12, 1858. He was graduated in the Nevada High School's first class in 1878 and from the State University medical school in 1881. Beginning practice at Iowa Center, then a country village near his birthplace, he moved the next year to the new town of Maxwell which was established when the Milwaukee railroad came through. Here he lived continuously the remainder of his life. On August 19, 1931, he was found sitting in his office chair, with his paper in his lap as though he had fallen asleep. Such was the peaceful end of a useful life. He had lived his entire life and practiced his profession more than fifty years in the community in which he was born.

In the passing of Doctor Joor the Story County Medical Society suffers a great loss. His loyalty to our organization was sincere and unquestioned, and in its councils no voice was listened to more intently or commanded greater respect. His presence at its meetings could be confidently expected if it was at all possible for him to be there, and when assigned a place on the program there was no question as to the fulfillment of his part. We recognized in him the finest type of the old time family physician—a type which seems to be passing, and with deep and oft expressed regret. He had a broad knowledge of the science of medicine and combined it with a large endowment of common sense. This made him a safe counselor.

On first acquaintance he might have seemed brief and blunt. That was simply his way. He thought things out clearly and expressed himself accurately in well chosen words, and stopped when he was through.

He was alert in all civic activities of his home community, especially its Masonic organizations, public library and schools, in all of which he was a forceful factor. These appealed to him as opportunities to give of his strength, of his vision, to the end that others might lead larger and fuller lives. And if success is properly measured by the amount of satisfying experience encountered along the way, who shall question the richness of this long and useful life?

In a very fine sense he exemplified that "It is better to be useful in lowly, loving ways, upon the green sward and in sequestered vales, than to feel the chill winds blow where peaks swell into icy isolation 'mid the pomp of mountain splendors rushing on the sky."

Benjamin G. Dyer, M.D.,
Secretary, Story County Medical Society.

THE OPEN FORUM

(Continued from page 579)

following modification of the Perkins, Haskell-Klaus laws: Patients under above laws who are returned from the University Hospital to their homes should be cared for, when necessary, by their local physician at the expense of the state.

II. Owing to the increase in the annual dues of the Iowa State Medical Society for 1932, we, as a group of members, feel that the office of Business Director should be abolished.

III. We recommend that the clause of the constitution providing for the election of councilors by the House of Delegates be amended to read: "councilors to be elected by the delegates from their respective districts."

IV. We recommend that the election of officers of the Iowa State Medical Society be held on the second day of the annual meeting instead of on the afternoon of the last day.

V. We request that a copy of the above resolutions be sent to the Publication Committee of the Iowa State Medical Society for publication in the JOURNAL. Also a copy be sent to the Secretary of said Society for his records.

(Signed) J. C. RIORDAN, M.D., Secretary.

1932 ANNUAL SESSION MAY 4, 5, 6

The 1932 Annual Session is to be held Wednesday, Thursday and Friday, May 4, 5, 6, in Sioux City. The exact date was fixed by the Board of Trustees in accordance with authority granted by the 1931 House of Delegates. The state meeting thus comes the week before the American Medical Association in New Orleans.

THE JOURNAL BOOK SHELF

BOOKS RECEIVED

*ACCIDENTAL INJURIES—The Medico-Legal Aspects of Workmen's Compensation and Public Liability. By Henry H. Kessler, A.B., M.D., F.A.C.S., Medical Director, New Jersey Rehabilitation Clinic; formerly Medical Advisor, New Jersey Workmen's Compensation Bureau.—Octavo, 718 pages with 157 illustrations.—Lea & Febiger, Philadelphia, 1931.—Price, cloth, $10.00 net.

*CHEMISTRY FOR NURSES—A Combined Text and Laboratory Manual—By Harry C. Biddle, A.M., Instructor in Chemistry, School of Nursing, Western Reserve University.—336 pages with 74 illustrations.—F. A. Davis Company, Philadelphia, 1931.—Price, $2.75.

*CLINICAL DIETETICS—A textbook for Physicians, Students and Dieteticians.—By Harry Gauss, M.S., M.D., F.A.C.P., Instructor in Medicine, University of Colorado, School of Medicine. Assisted by E. V. Gauss, B.A., formerly Assistant Dietetician, Presbyterian Hospital, Denver, Colorado.—Illustrated.—The C. V. Mosby Company, St. Louis, 1931.—Price, cloth, $8.00.

FOOD ALLERGY—Its Manifestations, Diagnosis and Treatment.—With a General Discussion of Bronchial Asthma.—By Albert H. Rowe, M.S., M.D., Lecturer in Medicine in the University of California Medical School, San Francisco.—442 pages.—Lea & Febiger, Philadelphia, 1931.—Price, $5.00.

HEALTH ON THE FARM AND IN THE VILLAGE—By C.-E. A. Winslow, Dr. P.H., Professor of Public Health, Yale School of Medicine. 281 pages, illustrated. The Macmillan Company, New York, 1931. Price, $1.00.

AN INTRODUCTION TO GYNECOLOGY—By C. Jeff Miller, M.C., rPofessor of Gynecology, Tulane University School of Medicine; Chief of the Department of Gynecology of Touro Infirmary; Senior Visiting Surgeon, Charity Hospital, New Orleans.—Illustrated.—C. V. Mosby Company, 1931.—Price, $5.00.

THE MEDICAL CLINICS OF NORTH AMERICA.—(Issued serially, one number every other month.) —Volume 14, Number 6, and Index Volume.—(New York Number, May, 1931.) —Octavo of 300 pages with 55 illustrations.—Per Clinic Year, July, 1930, to May, 1931.—Paper, $12.00; cloth, $16.00 net.—Philadelphia and London: W. B. Saunders Company, 1931.

*MEDICINE.—AN HISTORICAL OUTLINE.—By Major G. Seelig, M.D., Professor of Clinical Surgery, Washington University School of Medicine.—Second Edition.—49 portraits and other illustrattions.—The Williams & Wilkins Company, Baltimore, 1931.—Price, $3.00.

*TRANSACTIONS OF THE COLLEGE OF PHYSICIANS OF PHILADELPHIA.—Third Series, Vol. lii.—1930.—Edited by Walter G. Elmer, M.D.

USEFUL DRUGS—A List of Drugs Selected to Supply the Demand for a Less Extensive Materia Medica with a Brief Discussion of their Actions, Uses and Dosage.—Prepared under the Direction and Supervision of the Council on Pharmacy and Chemistry of the American Medical Association.—Edited by Robert A. Hatcher, Ph. M., Sc. D., M.D. and Cary Eggleston, M.D.—Eighth Edition.—Published by American Medical Association.

Review appears in this issue.

BOOK REVIEWS

ACCIDENTAL INJURIES

The Medico-Legal Aspects of Workmen's Compensation and Public Liability. By Henry H. Kessler, A.B., M.D., F.A.C.S., Medical Director, New Jersey Rehabilitation Clinic; formerly Medical Advisor, New Jersey Workmen's Compensation Bureau. Octavo, 718 pages with 157 illustrations. Lea & Febiger, Philadelphia, 1931. Price, cloth, $10.00 net.

Increasing interest is of necessity being directed to the accidental injuries, which, because of their medico-legal aspect, become a question of public liability. Every practicing physician will at some time be called upon to appear either in court or before a review board to render testimony relative to such injuries. Too frequently in the past medical testimony presented in such cases was offered without a proper viewpoint relative to the factors determining liability.

It is, indeed, worth while to have at one's command a complete text, compiled with extreme care and from a broad experience, for reference. This volume prepared by Dr. Kessler is in every sense such a guide. From a personal experience of over 63,000 cases reviewed by the New Jersey Compensation Bureau, supplemented by the findings of foreign experts during the half century that compensation has been effective in those countries, Dr. Kessler is, indeed, fitted for the task and the thoroughness and accuracy of his discussions reflect this broad experience.

The volume discusses the medical aspects of workmen compensation laws, schedules of specific injuries, the pathology and end-results of trauma, the general underlying principles of disability, the specific injuries of the upper and lower extremities, the head, the spine, the thorax, the abdomen, with adequate discussion of injuries to the eye, face, nose and throat. His chapters on the traumatic neuroses, occupational disease and rehabilitation of the disabled are especially noteworthy.

This volume can be recommended to physicians, lawyers, employers, insurance companies and all members of the workmen's compensation board. The volume is well illustrated.

CHEMISTRY FOR NURSES

A combined text and laboratory manual. By Harry C. Biddle, A.M., instructor in Chemistry, School of Nursing, Western Reserve University. 336 pages with 74 illustrations. F. A. Davis Company, Philadelphia, 1931. Cloth. Price, $2.75.

This volume covers the lectures and laboratory course in general chemistry for nurses. It is intended to be covered in a 45 hour course. It has

been nicely arranged, and has an outline at the beginning of each chapter, together with questions, review questions, and topics for oral and written reports in each subdivision.

There are many blank pages for personal notes. The reviewer would take exception to a few of the statements which are rather broad, such as on Page 21: "Calcium increases clotting of the blood in nose and throat operations" without reference to surgery elsewhere. Page 22—Iodine is an "antiseptic in alcoholic solutions," forgetting aqueous solutions. Page 120—Organic acids are "specific in rheumatism." Page 150—"A continued use of alkoloid salts makes them habit forming drugs." This is not true of all of them. Page 163—Amino acids are the "products of digestion of protein in the blood." Page 191—Veronal is a "specific for epilepsy." Page 192—Mentions "specifics for sleeping sickness, angina pectoris, pneumonia and other dreaded diseases." Page 233—"Diabetic patients who are on carbohydrate-free diet." There is no exclusive carbohydrate-free diet. Page 278—"Free acid secreted causes the pyloric valve to relax." This is debatable. Page 309—Acetone in the urine indicates diabetes mellitus. Page 310—The author speaks of a 5 per cent solution of boric acid. Boric acid is sparingly soluble.

The volume is well arranged and should prove as a practical outline for nurses. The reviewer has had considerable experience teaching nurses and realizes how difficult it is to attempt to teach in a few hours a topic it takes years to master. D.M.B.

CLINICAL DIETETICS

A textbook for Physicians, Students and Dieticians. By Harry Gauss, M.S., M.D., F.A.C.P., Instructor in Medicine, University of Colorado, School of Medicine. Assisted by E. V. Gauss, B.A., formerly Assistant Dietician, Presbyterian Hospital, Denver, Colorado. Illustrated. The C. V. Mosby Company, St. Louis, 1931. Price, cloth, $8.00.

Dr. Harry Gauss is a graduate of Rush Medical School, and his book on Clinical Dietetics shows the earmarks of his training in physiology under Dr. Carlson, and in gastroneurology under Dr. Bertram Sippy, to whom he has dedicated his book.

On the whole the book is well written, and the physiologic principles of diet, food and digestion are thoroughly covered.

Each diet is prefaced with a discussion of the medical phase of the subject, and his diet lists are divided into hospital diets, sample diets, and dietary instructions to the patients.

His discussion of Kosher Dietetics is especially well chosen.

The illustrations are appropriate, the paper of good quality, and the text should prove of equal value to students, practitioners and dieticians.

D.M.B.

MEDICINE—AN HISTORICAL OUTLINE

By Major G. Seelig, M.D., Professor of Clinical Surgery, Washington University School of Medicine. Second Edition. 49 portraits and other illustrations. The Williams & Wilkins Company, Baltimore, 1931. Price, $3.00.

Modern medicine reflects the contributions made by physicians throughout the ages. Its attainments can be best measured by the knowledge of its tedious and painstaking growth. It behooves every physician to acquaint himself with the historical background upon which this science rests. During the past few years, reflecting a markedly increased interest in historical matters, there have appeared a number of well written, highly authoritative histories of medicine. It is significant that several of these have been presented by eminent historians in markedly condensed form, appealing alike to the busy practitioner, the medical student, and the intelligent laity.

This volume, prepared by Dr. Seelig, is one of the most fascinating to reach our attention. It is unique in the fact that the author has uniformly employed a modern form of expression which has added much to the sprightliness of the story and to the interest which the readers may find in a work of this sort. His outline begins with primitive medicine and rapidly develops in subject through the period of Greek and Roman medicine, the medicine of the Middle Ages, the Sixteenth, Seventeenth and Eighteenth Centuries, with a more extended discussion of the medicine of the Nineteenth Century, bringing the matter entirely up to date with a review of the accomplishments of the present time. The text is illustrated with forty-eight plates, portraits of distinguished physicians of all times. The volume bears our unreserved recommendation.

TRANSACTIONS OF THE COLLEGE OF PHYSICIANS OF PHILADELPHIA

Third Series, Vol. lii, 1930. Edited by Walter G. Elmer, M.D.

In this volume are presented the papers read before the College from January, 1930, to December, 1930, inclusive, together with the transactions of the College, members' lists, etc.

To those who have reviewed other editions of this annual report, it will suffice to say that this volume maintains the high standard previously established. To those who are unfamiliar with the volume I would call attention to representative articles which will reflect the type of discussion reported in the volume: Hepatitis by John B. Deaver, M.D., The Management of Goiter and Hyperthyroidism. The Mutter Lecture, by Frank H. Lahey M.D., Additional Observations on the Effect of Sodium Amytal Anesthesia Upon the Uterus and Its Use in Obstetrics and Gynecology, by John C. Hirst, B.A., M.D., and Maxwell E. Lapham, M.D., Gas Gangrene by Professor M. Weinberg, and in all there are sixteen papers of general interest, twenty-nine papers on ophthalmology, and sixteen papers on otology and laryngology.

The JOURNAL
of the
Iowa State Medical Society

VOL. XXI DES MOINES, IOWA, NOVEMBER, 1931 No. 11

PSYCHOPATHIC PERSONALITY*

ANDREW H. WOODS, M.D., Iowa City

NORMAL BEHAVIOR LEADS TO SUCCESS AND SERENITY

When light falls on the eye, retinal cells act upon a group of nerve cells in the mid-brain, and these in turn stimulate the sphincter muscle of the iris so that it contracts. This saves the retina from damage. When a new-born infant begins to need food, certain odors and a general feeling of tension (hunger) stimulate nerve cells in the base of the brain, and they produce sucking movements. When a youth sees a beautiful maid, his mouth waters, he makes peculiar movements, which seek closer acquaintance; then these become more complicated, until he wins her. Later, still more complex behavior results, until infants are born; whereupon activities, that we call instinctive, are carried out by his brain cells, which lead him to protect, nourish and rear the offspring until they are able to live independently.

All this is behavior. And, in general, behavior protects and benefits the whole organism.

When behavior balks the man's career and produces unhappiness, it is abnormal. Failure to work so as to get food, failure to win friends, and, particularly, disagreeable actions, such as truculence and stealing, are subversive to a man's career and his happiness.

If a man burns houses, fights, or steals, to get vengeance or to win easy money, we call him a criminal. We understand such motives, and courts assign appropriate punishment. If the man is crazy or intellectually defective, we excuse him, and the state takes care of him.

Outside of these forms of misbehavior, there is a group of cases in which the general public and the courts are puzzled as they seek to understand men's motives. A man steals, for instance, and then gives away what he stole.

One twelve-year-old boy, recently examined, had persistently stolen for several years. He made presents of money and jewelry to his school friends, and he made little effort to conceal his thievery. When we talked with him about the matter, he took an intelligent interest, discussed the misbehavior as wisely as his mother could have discussed it, and he both realized and stated that he would have to stop this, or he would get into trouble. Still, flogging, scolding and pleading were followed by continual repetitions of the stealing.

DEFINITION

This class of persons, whose misbehavior seems incomprehensible to us, has been called *morally defective,* particularly by British writers. It is clear, at any rate, that it is not due to *intellectual* defect. More common diagnostic terms are *psychopathic personality, constitutional psychopathic inferiority* and *psychopathy.* But in using these terms we must keep in mind that *the whole class is merely a remainder* after we have subtracted from the mass of persons in the world who misbehave, all of the criminals, all who are merely bad, in the ordinary use of the word, and all who are intellectually defective or insane.

To illustrate this type of personality, a young woman of twenty-six, Alice —, was the illegitimate child of parents who had abandoned her, and had been adopted by a clergyman and his wife when a few weeks old. She was recently brought to the Psychopathic Hospital, after several weeks of dramatic over-activity. She was supposed to have become suddenly blind and she was apparently mute when we saw her. Her condition was seen to be hysterical, and she was soon enabled to talk. She detailed the events of her life in a story which would have been good material for a movie film. She said her father was a wealthy bootlegger, that he had supplied her with money and automobiles, that he had disapproved of her second marriage and was determined to kill her husband, and that he and his agents were coming nearly every night to the husband's home to get him. She told in detail how she had shot one of these men, and she pictured the life of terror which her stories had produced in the home of her husband and his parents.

This was all purely imaginative, but the husband and his family had accepted it as true, and their life for a year past had been one of constant tension because of this imagined danger.

*Presented before the Eightieth Annual Session, Iowa State Medical Society, Des Moines, May 13, 14, 15, 1931.

Investigation showed that this girl had been an attractive and friendly child, that from early childhood she had continually lied and produced reams of romantic stories. She had begun to steal at the age of eleven, and frequently had forged checks on her foster parents. She was expelled from high school because of an obscene story she had produced. She married a worthless boy and forged a check to get money enough for a big feast at her wedding. He deserted her, when she was found to be pregnant, and her foster parents took her and her child. She was promiscuous sexually for a few intervening years, and finally, on a day's notice, married the second husband and then she proceeded to make miserable all who were around her by her irregularities and stormy, impetuous behavior.

The diagnosis in this case was psychopathic personality with hysterical outbreaks.

A definition of psychopathic personality might be framed from this case as follows: a type of psychic makeup in persons not insane or intellectually defective, which, from childhood, works to the immediate or remote disadvantage of the individual and often causes trouble and suffering to others; the motives underlying such behavior being so different from those of ordinary criminals and bad children, that we find the misbehavior difficult to understand.

SUBDIVISIONS OF PSYCHOPATHIC PERSONALITY

Many attempts have been made to subdivide the psychopaths into classes, according to the causes or according to the manifestations. That of Schneider gives ten groups which are assembled on the basis of the general dispositions or instinctive urges of the patients. They are:

(1) *The hyperthymic*, who are over-enthusiastic, cheerful, yet changeable, and always unreliable.

(2) *The depressed*, discouraged, pessimistic persons, the kill-joys, who are critical and hard.

(3) *The self-distrusting*, who are timid, irresolute and sensitive. These are highly subjective and introspective, unable to produce changes in the real world around them which would be useful for themselves or others.

(4) *The fanatics*, who spend their energies in debating over dogmas. They may become mountebanks and leaders in rebellions. They disturb others by argumentation and efforts to proselytize.

(5) *The seekers after reputation*, who make no effort to develop real ability. They want to be prominent, the center of the stage, and to gain newspaper recognition. Here are the pretenders and fakers, like Dr. Frederick Cook.

(6) *Those of labile, shifting mood*, whose emotions change with every new aspect of their environment. These are easy-going and easily wrought up. They yield readily to temptation. They often have cravings for drugs, sex, stealing or firing houses, and seem to need the stimulation that comes from such experiences.

(7) *The emotionally explosive*, who tend to act with sudden energy upon their emotions. Here are the high-tempered and the explosively erotic and violent psychopaths.

(8) *The cold, salamander-like*, who have neither conscience nor remorse, and who feel no pity or sympathy for others. They are cruel to animals and to men and become cold-blooded criminals.

(9) *The weak-willed*, the floaters, who are influenced by the opinions and suggestions of others. They become the cat's paws of criminals. They are continually resolving to reform, but are incapable of acting from day to day upon any continuous plan.

(10) *The asthenic*, who perhaps would better be listed as psychoneurotics of the neurasthenic type.

As we seek to locate any given case of psychopathic personality under one of these headings, we find that the subclasses overlap. One individual may show the characteristics of several of these types. It is best, therefore, to view the marks of the ten classes rather as manifestations of the traits of psychopaths, almost any constellation of which may appear in a given case.

DIAGNOSTIC FEATURES OF PSYCHOPATHIC PERSONALITY

In making the diagnosis of psychopathic personality, the following seven features may be regarded as common to all individuals of this class, and it is only when these marks are present that the diagnosis can be applied.

(1) *Chronicity, persistency.* The poor behavior of the individual is not an exceptional incident in his career, but is habitual and dates from the early part of his life. It often becomes conspicuous at puberty. It will probably continue in spite of our best efforts, through the person's environment can be adjusted so that, under control, for instance in a well-regulated reformatory, the misbehavior will be minimized.

A patient, Charles —, referred by an Iowa court, has never held a job for more than a few weeks, has never supported himself, has been punished repeatedly for drunkenness and stealing. The county authorities have been clement and have used their best efforts to persuade this boy to keep out of trouble. Recently, while drunk, he attempted to rape a girl, and was accordingly sent to jail. When apprehended, he became mute, wore a "poker face," began to soil himself, and talked of having a dial in his abdomen at the site of an appendicitis operation. The diagnosis was psychopathic personality with a transitory psychosis.

It is likely that if this youth were turned loose in a community, his psychosis would disappear. It is a result of stress in an emotionally unbalanced personality. However the underlying psychopathic personality will continue and is likely to show itself by repeated disorderly behavior.

(2) *Based on constitutional makeup.* The fact that a person will continually misbehave, although he knows it always gets him into trouble, suggests that the nervous organisms of psychopaths are peculiarly constituted. Science has not yet discovered a way to tell whether such traits as bad temper or suspiciousness are due to the constitutional makeup of the nervous system or to such early influences in childhood as would induce such behavior even in a normal person. We know, however, that encephalitis epidemica has repeatedly changed the disposition of its victims so that a frank, open-hearted and reliable boy becomes deceitful, unruly and persistent in sexual or other misbehavior. We know that damage done to the brain at birth often results in motor disturbances that are accompanied by emotional instability, even though, in many cases, the intellectual powers are spared.

We know in lower animals that a particular fertilized ovum is so arranged internally that the mature adult to spring from it is predestined to be fierce, a killer of man and beast, cruel; that he will mate in a certain way, and will show a whole chain of definite characteristics, all of which were arranged for in the germ cell. This germ cell is destined to become a tiger. Another germ cell, of much the same appearance, will produce a meek, grass-eating and easily domesticated adult form. It will become a cow. These dominant characteristics are unquestionably constitutionally determined.

For practical purposes in diagnosis, however, we are not yet in position to limit the cases to be described as psychopathies to those in which we can prove that the misbehavior is on an organic basis and not due to early conditioning. If it is chronic and persistent, it is probably due to some constitutional peculiarity of the individual, yet we cannot always prove its organic basis.

(3) *Disadvantageous to the individual.* The unfortunate characteristic of behavior in the psycopath is that it is obviously to his own disadvantage. Usually, though by no means always, the psychopath is a lawbreaker and gives trouble to his community. But the weak-willed class, the pretenders and the self-distrusting types are often merely futile, and fail to develop their own powers. They may disturb their neighbors but little.

The disadvantage often shows itself in making the individual a public charge, because he is unable to support himself. Yet, in many cases, the psychopath is the inheritor of wealth; for the sons and daughters of rich families are often seen in this class. It is also to be remembered that the psychopath may be a genius. The public may tolerate his misbehavior and pay him handsomely for his music, art, or other contribution, in spite of his psychopathy. The Roman emperor Caligula was a violent psychopath, and, during the four years of his reign, accumulated wealth, but the disadvantage to himself of his behavior soon became obvious, and in the end he got his dues.

The fault in behavior which disrupts the career and happiness of the person may consist in suspiciousness, based on a feeling of inferiority, which makes the individual critical and bitter toward others to such an extent as to interfere with the minimal cooperation necessary for success. Some of this class are attractive in appearance and readily make acquaintances; but before the relationship has gone far, the acquaintances fall away, and the person is finally left alone—frozen out of clubs, and not considered for reappointment or advancement in trade or profession.

The disadvantageousness of his behavior usually causes the individual embarrassment and unhappiness; but this is not always true. Many psychopaths are not conscious of suffering because of their shortcomings.

One attractive young high school girl of sixteen has passed through several years marked by frequent petty thievery, the forging of checks and other documents, and continuous romancing and lying. She is bright and seems entirely unconcerned. Her general attitude suggests as her motive that, being attractive and liked by all of her acquaintances, she has always been able to get what she wanted by the easiest way, and, if trouble comes, she believes someone will certainly turn up to get her out of it.

Abnormalities in behavior, such as sexual perversions, usually perplex the patient and make him uphappy, but the mere existence of a sexual perversion need not interfere with the general career or the serenity of the person concerned. Many sexual perverts either live without overt indulgence, or they find partners who accept their peculiar attentions, and such a pair get along quite as serenely as would a married couple. These contented and law abiding perverts are hardly to be considered psychopaths—any more than lovers of garlic and Limberger cheese should be thus classified. Their tastes are queer, but they live without disturbing others or themselves.

(4) *Incorrigibility.* The most striking characteristic of the brain cortex is that it enables the organism to profit by past experiences. Behavior produced by cortical action is not all determined by automatic, neural arrangements as in the bees and ants, and as in man's vegetative organization. In view of a given predicament, a whole series of possible plans for meeting it is brought up by cortical action. These plans are compared, and finally

one of them arouses in the person a feeling of greatest-satisfactoriness-on-the-whole. In this way, man plans his behavior so as to get results satisfactory to himself, not only for the present but for the future; and, in planning it, he may profit by all the experiences of his past life. The psychopath fails at this point. He does not profit sufficiently by past experience.

It is as natural for a child to reach out and seize what it wants as it is for a dog or bird to do so, but even a dog that has been whipped several times for taking certain things learns to control that tendency. A normal human being between the ages of seven and seventeen has learned by experience that many things, pleasing enough to do at the moment, nevertheless cause discomfort afterwards. Eating too much, striking and offending playmates, or taking things which belong to others, are regularly followed by disadvantages which more than counterbalance the temporary pleasure immediately following the acts themselves. It is from this discipline that young people acquire habits of truthfulness, honesty and courteousness. The psychopath, after repeated disagreeable experiences from uncooperative behavior, nevertheless continues to misbehave in the same way.

(5) *Living for the present.* The psychopath lives for the present reward, and obeys the immediate desire or impulse. Foresight depends upon full normal cortical action; but, where cortical action is inadequate, the behavior is determined by what is immediately satisfactory, and not by what will be most satisfactory in the long run. I have known psychopaths whose explosive sexual craving leads them to rape, even when it is obvious that lynching will be the immediate result.

Those of us who have quick tempers can understand to some extent the mechanism of impulsive motivation. A man runs your automobile off the side of the road as he overtakes and passes you. The impulse of the moment presses you to overtake him and smash his car. Of course, even a moment's further thought shows the folly of such a course, and your philosophy comes to the fore, leading you to pull back on the pavement and to try to forget the incident. The nervous system of a psychopath carries into effect the plan of action determined by the immediate sexual, acquisitive, self-protective or self-gratifying impulse.

(6) *Inadequacy of feelings.* The action of the brain cortex is guided by feelings. Most people think of intellect as independent of feelings, but each step in cortical action is determined by comparisons in which the indicator is some form of affective response. At the end of a process of reasoning, after all possible plans of action have been presented and compared, there comes a *feeling* that one plan is most suitable or satisfactory. We call this "decision."

Furthermore, the objects of attention at any given moment are determined by *interest,* which is a most important form of feeling. Of the thousands of things that are perceived, or that can be thought about at any time, one man, because of his particular feelings, will choose one; another, another. The chain of associations which leads us from step to step in logic to a final conclusion, is determined by interest in the particular objective or goal.

The nearest that we can predicate at present the organic cause of psychopathic personality, is that in these persons the action of the cerebral cells, which produce feelings, is at fault. What is suitable or satisfactory to the psychopath is not what the average man finds satisfying. However, we know almost nothing about this part of the field of brain physiology.

Character. It is the constancy of a man's feelings and cravings which enables us to foresee how he will act a year hence. The fact that one trusts a man today and therefore argues that he can trust him next year, is based upon the presumable continuance of that man's feelings, tastes and cravings. It is evident, therefore, that character depends ultimately upon the continuity of the general type of feelings and cravings in a given individual, so it is correct to say that the psychopath has an essential fault in character.

The inadequacy in the realm of feeling often shows itself in psychopaths as pitilessness, cruelty and a lack of ability to sympathize with the feelings of others.

One of our patients played jazz music while the rest of the family sat around the bier of the dead mother. When questioned about this, her reply was that she didn't see any use in crying, and she played jazz because she liked it.

Another patient robbed his poor father and mother who were straining every resource to pay the boy's fines and keep him in school.

The fault in feelings also shows itself in a lack of continuous interest in detailed work. The psychopath is often verbosely ambitious to be great or even useful; but he is unable to keep up continuous interest in the humdrum steps that are necessary to develop technical ability. This is strikingly true in the wanderers and dabblers who try a new form of work every month.

Abnormality in the feelings that underlie essential instincts appears in the sexual perversions. In the homosexual person, for instance, the natural feeling toward a person of the opposite sex does not appear, but, in its place, there is usually a cor-

responding feeling for a person of the same sex. The strength of sexual feeling in the homosexual may be just as great as in the normal heterosexual personality. The young man who strangled to death a small boy in Dubuque last year told me that as he looked at this child, he felt such an overwhelming craving for intercourse with him that even if an axe had been held over his head, he could not have controlled himself.

(7) *A tendency to slip into psychosis or psychoneurosis.* The inheritance from ancestors in these cases is often bad. Many patients show a family history which includes insane, mentally defective and epileptic members. If the misbehavior in question in a given case is primarily that of a particular form of insanity, such as schizophrenia or mania, and if the extent of the period of misbehavior corresponds with that of the insane process, the diagnosis of psychopathic personality would not be made.

Having inherited traits which tend to the production of insanity, however, the psychopath, in addition to his psychopathy, may develop insanity or a psychoneurosis. He is more liable to such mental diseases than is the average man, because the psychopath is usually in continual conflict with his environment, so that the stress of life becomes more and more intense as the years go by. For this reason, the strain frequently becomes excessive, and he finally breaks. The cases of Charles —, and Alice —, mentioned above, illustrate this tendency of a psychopathic personality to become complicated by psychosis or hysteria.

A youth of nineteen, recently examined, was overactive, jolly and full of schemes for accumulating wealth quickly. When opposed, he became truculent and ready to fight. He often was violent. His sexual life had started late, but it came on with a rush at the age of seventeen. He at once went into all sorts of sexual indulgences and was unable to restrain himself. He lost his job and had serious conflicts with his family. While in the hospital, he had a frank attack of mania.

The diagnosis in this case was "psychopathic personality with psychosis," because the irregular misbehavior had persisted throughout a period of three years. It seems probable that after the manic process has quieted down, the underlying psychopathy will continue, but if this boy should then return to a normal type of behavior, the diagnosis would have to be corrected to "manic depressive insanity," and the three years of misbehavior would be considered as an unusually long prodomal, or pre-psychotic, stage.

SUMMARY

1. Persistently futile or annoying behavior is in many cases understandable. After removing all cases due to insanity, intellectual defectiveness and ordinary selfishness or weakeness, there is, however, a remainder of cases in which we cannot fathom the motives. These persons we call psychopaths; and their constitutional makeup we call psychopathic personality.

2. Common to all of these cases of misbehavior are the following characteristics: Persistency, fixity in the constitution of the person, disadvantageousness, incorrigibility, short-sightedness, basally defective affect, and a tendency to slip into psychosis or psychoneurosis.

3. Psychopaths are abnormal and usually require institutional control. If no psychotic or psychoneurotic process is present, they should be disciplined for law-breaking. If wise discipline has proved ineffectual after two or three applications, the offending psychopath should be permanently restrained in a proper state institution.

Discussion

Dr. George Donohoe, Cherokee: Dr. Woods' presentation of the psychopathic personality is complete, accurate and leaves little, if anything, to be brought out by those who discuss his paper. Certain parts of his paper must therefore be taken up and emphasized.

By my training, my reading and my observation of persons, set out by society as anti-social, that is, the insane, the delinquent and the criminal, it is my opinion that psychopathic personality is solely a character defect. It is not an insanity, and it is not feeble-mindedness. In other words, it is not a disease of the mind or a lack of intelligence, but it is a course of conduct followed from very early years by individuals of either normal or superior intellect. The British authorities group these individuals under the name of "Moral Imbeciles" which is as good a name as any other. The imbecility refers to the arrested development of moral sentiments, rather than to the intellect.

To understand my position, it is necessary to say a few words about character and how it is built up. It is agreed that desires are the driving forces of individuals. If these desires are carried out by impulses based upon sense perceptions alone, we cannot achieve a higher character than that built up by any animal which has the five senses.

Moral character in man, as we view it, is a system of conduct based upon impulses of imagination toward certain goals or ideals rather than upon sense perception. These goals or ideals must be high and altruistic in order to build up good character and may be achieved by an individual whose intellect is very ordinary or even below normal.

The units of character are the sentiments. We will not go into them minutely, but let us name a few: hatred, love, contempt, respect, friendship, self-regard. All of these sentiments are in the characters of animals, more highly developed of course in the domesticated animals, and as they are developed we

can readily distinguish a good horse from an outlaw or a wonderful field companion from a common cur. We distinguish them by their acts of conduct.

The difference between the character of man and that of other animals is the development of moral sentiment to guide and control the instinctive prompting of anger, fear, hunger, and lust and the natural sentiment of self-regard and contempt and respect. A good moral character is one formed by setting up early in life high ideals in the natural sentiment of self-regard, and contempt or respect for others. This procedure is the only way we can explain that the conduct of an individual is in the main either good or bad, social or anti-social. The sentiment of self-regard is perhaps the strongest sentiment of character, it is our own estimation of ourselves when judged by our own ideals, our secret aims in life. The goal may be high or low, trivial or mighty, nevertheless, our self-assertion and submissions in order to reach this goal constitute our acts of conduct.

The psychopathic personality or Moral Imbecile is one whose ideals are below the accepted moral standards of the society in which he lives. His self-regard drives him to carry out impulses to achieve his aim in life, regardless of consequences, just as strongly as a normal moral character will fight for his higher ideals.

The acts of conduct of an individual are also governed by the sentiments of contempt and respect. The moral character sets up ideas of contempt for those actions and persons which bring suffering upon others by over self-exertion and builds up our respect for conduct and individuals which bring happiness to others; also a desire to emulate submission of primitive desires at the cost of personal gratification.

The ideals of a psychopathic personality are just the reverse. His respect is for those individuals and groups whose conduct is governed by the instinctive primitive impulses. His contempt is for those individuals and groups who submit from a purely moral sentiment.

Perhaps the only issue I may take with Dr. Woods' paper is a matter of words; first, when he states that the behavior of the psychopath is "obviously to his own disadvantage," and again, when he says, "the psychopath repeats his anti-social acts" in spite of severe punishment in the past.

These are minor differences and perhaps Dr. Woods' position is more sound than mine. As to the interpretation of the words "obviously to his own disadvantage," if these words mean a normal moral character viewpoint of the situation, Dr. Woods is correct, but isn't it true that there is greater piece of mind and contentment in an individual whose conduct satisfies his own ideals and aims in life regardless of material comfort or the opinions of others, than there is in an individual whose creature comforts leave nothing to be desired but whose self-regard, that is, his self-esteem, is outraged? If this is not true, there would have been no martyrs, no heroes in the world's history.

The second issue is also trivial,—"in spite of severe punishments in the past." I cannot agree that society at present in this country administers severe punishment for offenses against individuals or the state. In this country the only severe punishment I am aware of is the death penalty and it is not on the statute books of all the forty-eight states. All other punishments are simply deprivation of liberty and perhaps enforced idleness for a term of years under conditions more favorable as to creature comforts and amusements than the average law abiding citizen enjoys.

In conclusion, to be a good doctor in the eyes of many people you must have a cure. There is no doubt that there are psychopathic personalities but the number is quite limited and many big and little criminals are sometimes brought under the protection of this name to escape a felony. To eventually reduce the number of true psychopaths, society must look to the training of children by old-fashioned methods, by the lessening of materialistic aims and the building up of spiritual ideals. There are but three institutions in which this training can be done, namely: the home, the church, and the school.

If after such training there are still individuals who are anti-social problems, why not try severe punishment? As a suggestion, it is common knowledge that these psychopaths are usually quite amenable to ordinary hospital management. It is also common knowledge that they are unwilling to stand physical discomfort and pain. They are notoriously vain. Why not return to a few lashes on the bare back; it is painful, it can do no harm to the individual physically, and there is no glorifying his vanity such as he gets today in the public press.

If the psychology of the psychopath is truly based upon primitive sentiments, why not treat him to something he can readily understand. Every one knows that it does not take long to house-break a dog by rubbing his nose in the mess he has made.

Dr. F. A. Ely, Des Moines: The gentlemen who have just preceded me are, as you know, institution men. I began my interest in this subject as an institution man and then was precipitated into an environment in which I had to face many of these problems in an ultra-practical manner, not always able to have at my back the support of a group of men who were thinking scientifically.

This problem of the psychopathic personality is one of the most trying and difficult ones with which we have to contend. I heartily agree with Dr. Woods in emphasizing the factor of incorrigibility. Persons possessing psychopathic personalities are human machines precipitated into this world not quite hooked up volitionally and emotionally, and as a result, must be considered from this viewpoint.

A group of this sort may think that this subject is of little importance, but I wish to say that there are few general practitioners who are not frequently consulted regarding individuals of the type under consideration.

Many family physicians refer to me check-forging, adolescent boys because they are mystified concerning

their apparent heedless repetitions of this illegal act. There is a sort of check-forging syndrome characteristic of one form of psychopathic personality.

From a medico-legal viewpoint, we are often met with this situation. An individual is arraigned for some criminal act, and his criminal responsibility is questioned. Upon investigation it is found that the malefactor is psychopathic. From an ultra-scientific standpoint, we cannot fail to recognize the diminished responsibility of such individuals, and yet our laws and legal precedents fail to make sensible provision for such situations. I have found it necessary many times in the interests of society to quiet my scientific scruples and declare psychopaths normal, because I knew that state prison sentences kept offenders out of circulation longer than the state hospital commitments.

Dr. Donohoe apparently believes that if a criminalistic person makes a bad mess, his nose should be rubbed in it. I assume a middle ground attitude in this respect. While I believe psychopaths are not wholly responsible for their acts, I do believe that, like animals, they are more or less responsive to severe and prompt discipline. I think that the trend of science is to make us too sentimental toward criminals. It is my belief that psychopaths should be made medical problems, but with our state hospitals so crowded with out-and-out insane patients, the psychopath is discharged early and soon returns to his antisocial habits. It is to be hoped that in the future some plan for early commitment of these people to some custodial institution may be devised, in which event their discharge should be determined by medical men and not by judges.

Dr. Paul W. Van Metre, Rockwell City: I just want to say one word in support of Dr. Donohoe's contention. As Dr. Woods, with all his scientific knowledge, is not able to ascertain that there is an undoubted constitutional basis for this psychopathic personality, why not turn, then, to the ideal which Dr. Donohoe has set up? It is time for the doctors to urge that education, contrary to our public school program, means more than mental education; it means even more than physical, which is being touched upon more than in my day; it means even more than mental and physical, it means also moral education.

The other point I wish to make is simply this, that it is time for the medical profession to insist that those who would have the benefit of medical training in this over-crowded day, shall be men of the highest moral character in the schools from which they came.

I want to apologize for taking the platform as a general practitioner, but may I at least compliment the learned essayist in that he gave us seven points which we can write down and remember.

Dr. Andrew H. Woods, Iowa City (closing): I am grateful to Dr. Donohoe and those who followed him for having emphasized certain points which lead to the consideration of some extremely interesting principles, particularly regarding the practical legal dealing with these cases. I believe with Dr. Donohoe that in these patients it is the character of the person which is at fault. I meant to imply that when I said that basically it is the feelings that are defective. How do any of us know that our behavior ten years from now about money dealings, or any matter of ethics, will be the same as today? We merely count upon the continuity of our feelings. Certain kinds of behavior disgust us and make us feel ill at ease today, and we are sure such feelings will be the same ten years from now. Here is the basis of all confidence both as to ourselves and others; the assurance that our feelings are going to continue about the same as today, when we then plan our practical behavior. It is thus that we trust one another for the future. Character, good or bad, is dependent upon the continuity of tastes and feelings.

In regard to incorrigibility, I do not mean merely that legal penalties fail to correct the psychopath. The person, after nature and society have done their best in the ordinary way to whip him into line and to encourage him to be courteous and honest, has not yielded. He does not seem to be normally teachable. It appears that we cannot replace this defect in feeling. As to legal measures, however, I think it is necessary, so long as actual insanity and mental defects are not present, to deal with the criminal psychopath under the same law that is used for and applied to the ordinary person. Our knowledge is not yet sufficient to make the fine distinctions necessary, and for practical purposes, that is the only method we can apply. By it, we test the individual's amenableness to corrective measures—that is *the degee* of the psychopathy. If he is corrigible to a certain point, you can guide him along and use him. But, if he kills, or if he commits rape, my own feeling is that we ought to apply the same *eliminative* legal statutes that we use with the ordinary offender. This, however, is not for vengeance; and it offers small hope of correcting the character fault. We may some day come to see that, after one or two long periods of training under restraint have failed, euthanasia will be better than life confinement.

SPINAL ANESTHESIA IN GENERAL SURGERY*

A. D. Neubert, M.D., Fort Dodge

Recent studies along lines of physiology and pharmacology have established spinal anesthesia as a valuable adjunct to general surgery. Changes in technic based on these studies contribute additional safety and usefulness to the method. Reports of series of cases and comparisons with other methods,[1] indicate that spinal nerve block is being used more extensively than ever before. It is no longer necessary to justify the practice and theory of spinal anesthesia, or to point out its numerous advantages. A need does exist, however, for the recognition of new pharmacologic facts bearing on its safe and rational administration.

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It is the purpose of this paper to review these facts and to describe a technic possessing advantages in safety and ease of administration.

PHYSIOLOGY

Reviewing briefly the physiology of spinal anesthesia: novocain introduced into the spinal canal causes a block of sensory and motor nerves, including vasoconstrictor fibers to blood vessels. In addition to loss of sensation, vasodilatation, and muscular relaxation occur, initiating a definite train of events. Decreased peripheral resistance causes a drop in blood pressure and the blood accumulates in the large vessels of the splanchnic area. This in turn causes diminished return flow to the heart, and decreased cardiac output. The pulse rate remains slow, due to unopposed vagus action, and so allows adequate time for filling of the heart chambers. The slow pulse rate is a safety factor in the presence of low blood pressure.

The brain does not tolerate anemia for a long period. Failure of blood supply results in syncope and respiratory paralysis. The use of the Trendelenburg position increases return flow of blood to the heart and prevents cerebral anemia. Low blood pressure is a natural phenomenon of spinal anesthesia and is not analogous to shock. The work of Koster[2] has rejected the notion that respiratory paralysis is caused by anesthesia of the medullary centers.

PHARMACOLOGY

The routine use of ephedrin has been advocated and is practiced extensively for the support of blood pressure in spinal anesthesia. The ability of this drug to cause vasoconstriction and rise of blood pressure is generally known; but additional effects—tachycardia and cerebral stimulation—have not been given sufficient attention. Chen's observations on these properties in 1924 and 1926[5] have been reviewed by Saklad[4] in a recent survey.

Tachycardia and cerebral stimulation can follow moderate doses of ephedrin in normal individuals. The degree and character of response to ephedrin is variable and unpredictable. Tachycardia or excitement may be the chief effect, with little or no blood pressure elevation. A drop in blood pressure may follow the administration of ephedrin in the presence of myocarditis, shock, atropin medication or previous doses of ephedrin. Saklad[4] and others assert that ephedrin tachycardia occurring in spinal anesthesia can change the vascular status from relaxation to exhaustion, similar to that of surgical shock, by shortening the diastolic phase of the heart cycle. Myocardial anoxemia, decreased output, cerebral anemia or cardiac failure may follow.

Ephedrin, therefore, should be used only with due regard to its variable effects, and avoided in the presence of myocarditis, cardiac insufficiency and shock. In the absence of contra-indication, its use should be followed by observation for ten minutes before lumbar puncture is performed. The pulse and blood pressure should be charted at five minute intervals throughout the operation.

LEVEL CONTROL

The accurate control of anesthesia levels has been overstressed. Light and heavy solutions of Pitkin[3] have not proved satisfactory in my experience and in others.[4,6,7&8] The action of strychnin in spinocain is antagonistic to novocain. The volume, size, and curves of spinal canals are variable, so it is difficult to conceive how a method demanding precision can give uniform results. The use of routine dosages of novocain, and the routine use of ephedrin cannot be subscribed to. In this method the use of the Trendelenburg position must be delayed for five minutes for surgery of the upper abdomen.

Abdominal surgery requires anesthesia to the nipple line, to allow for adequate exploration, traction on organ attachments, and the gradual recession of the anesthesia level. The fact that most anesthesia levels extend to the nipple line is no assurance of accuracy or control in any method. If diffusion extends to any portion of the spinal canal from the third thoracic nerves to the fourth cervical nerves the level will be found within a one-half inch band above the nipple line.

The Labat technic[10] uses barbotage in mixing and expanding the solution in the canal. This sometimes disengages the needle from the dura and complicates the procedure. Injection in the sitting position is distressing to a sick patient, and if sedatives are given beforehand, unsteadiness may hamper the operator. The lateral recumbent position is more comfortable and eliminates the necessity of barbotage.

Another method, a "volume control" technic,[9] claims control of the upward extension of anesthesia chiefly by varying the amount of spinal fluid used to dissolve novocain. The Trendelenburg position is not used, reliance being placed on larger doses of ephedrin for maintenance of blood pressure.

In the writer's technic, the Trendelenburg position serves a dual purpose; the prevention of cerebral anemia; and the control of anesthesia.

The injected solution of novocain has higher specific gravity than spinal fluid and is subject to the effects of gravity. By altering the position of the table, the bulk of the solution can be shifted

in the canal before much absorption occurs near the site of the puncture. This fact may be utilized in producing anesthesia at higher levels with smaller doses of novocain. For instance, 100 milligrams of novocain injected into a patient on a level table will extend the anesthesia nearly to the umbilicus. Injection in the Trendelenburg position will extend the anesthesia to the lower chest. Injection of the same dose in reverse Trendelenburg, will confine the solution to the cauda, and produce sacral block.

TECHNIC

The requirements of general surgery call for anesthesia in four zones: (1) perineal area, (2) the legs, (3) the abdomen, (4) chest, neck and head.

Zone of Anesthesia	Dose of novocain (mg.)	Amount of spinal fluid	Position during injection	Position during operation	Dose of ephedrin (mg.)
Perineal	50–100	½ c. c.	Reverse Trend. 10°	Same for 15 mins.	None
Legs	50–100	1 c. c.	Reverse Trend. 1°	Trend. 5°	25
Abdomen	150	2 c. c.	Level	Trend. 5°	50
Upper Abdomen	150–200	3 c. c.	Level	Trend. 5°	50
Chest Neck Head	200	4 c. c.	Trend. 1°	Trend. 10°	50

SUMMARY OF TECHNIC

Perineal Area—Anesthesia in the perineal area, the anus, rectum, urethra, bladder, vagina and vulva, may be induced by the injection of 50 to 100 mg. of novocain in 0.5 c.c. of spinal fluid with head end of table elevated ten degrees. This position should be maintained about fifteen minutes. No blood pressure fall occurs because the lumbar nerves are not involved. This method is simple and more satisfactory than a trans-sacral block or epidural caudal anesthesia.

Legs—For reducing fractures of the leg, 50 mg. of novocain dissolved in 0.5 c.c. of spinal fluid is injected while the patient lies on the affected side in the reverse Trendelenburg position of five degrees. Ephedrin, 25 mg., is injected intramuscularly ten minutes before the lumbar puncture, (if there is no contra-indication to its use). Anesthesia of the single leg follows, and no blood pressure fluctuation has been observed. If ephedrin is not used, then this technic should not be followed, but the procedure outlined for anesthesia of both legs should be substituted. Allowance should be made for the extreme muscular relaxation which permits wide separation of ends of fractured bones. Dilatation of the cervix and curettage of the uterus, repair of the cervix, the interposition operation, and operations on both legs require 100 mg. of novocain dissolved in 1 c.c., injected while the patient is in a one-degree reverse Trendelenburg position. On withdrawal of the needle, the patient is placed on the back and position changed slowly to Trendelenburg, five degrees.

Abdomen—For operation on the lower abdomen, herniotomy, pelvic work or appendectomy, the injection of 150 mg. of novocain in 2 c.c. of spinal fluid on a level table, followed immediately by the Trendelenburg position (five degrees) will give anesthesia above the xiphoid process. Cholecystectomy and extended gastro-intestinal operations may require 200 mg. of novocain in 3 c.c. of spinal fluid. The anesthesia will extend to near the nipple line.

Chest, Head and Neck—Anesthesia of the chest, neck and head will be induced with 200 mg. of novocain dissolved in 4 c.c. of spinal fluid and injected with the patient in a slight Trendelenburg (one degree) position. This observation for position should be made at a distance of several feet. A very slight lowering of the head end of the table is desirable, and the spine must not be curved laterally. After completing the injection, the patient is turned on the back, while the table is immediately placed in a ten degrees Trendelenburg position. Anesthesia of the entire body will result. The writer has produced complete head analgesia several times by this method, but not for operation on the head or neck. Koster reports 1,000 operations on chest, neck and head under spinal anesthesia.

DETAILS OF ADMINISTRATION

Premedication — Sodium amytal grains 3, or nembutal gr. 1½ by mouth the night before operation, assures rest, and also detection of possible idiosyncrasy to barbiturates. Two hours before operation a double dose is given by mouth. A small amount of hot water hastens absorption. This is prophylaxis against preoperative apprehension and also against novocain reaction. Ephedrin, 50 mgs., should be injected intramuscularly ten minutes before puncture, in the absence of contra-indications to its use.

Equipment—The equipment consists of: novocain crystals (Metz) in ampules containing 50, 100, 120, 150, 200 mgc.; Pitkin spinal puncture needle 22 gauge (B. D.); Luerlok syringe, 3 c.c. (B. D.); extra syringe and spinal needle (sterile); ephedrin solution 50 mg. in a 1 c.c. ampule, and five c.c. ampule of 1 per cent novocain for the skin. A small metal protractor and string is useful for estimation of degree of Trendelenburg position.

Position on Table—The abdominal preparation

should precede the injection. To conserve time, the field is covered with sterile towels held by adhesive tape. The position of the patient on the table is important in the performance of the lumbar puncture. The table should be raised or the stool lowered until the patient's back is at the operator's eye level. The back should be at the edge of the table, knees to chest, shoulders and pelvis straight, not tipped, and the back bowed toward the operator. An assistant on a foot stool helps the patient retain this position. The skin is prepared with ether, alcohol and iodin and draped with a sterile window sheet. The syringe and needles are best cleaned by rinsing in distilled water and absolute alcohol, and may be autoclaved for use in a small pack containing gauze, sponges, powder and rubber gloves.

Technic of Injection—Any suitable lumbar interspace is selected, and a novocain wheal made in the skin with a fine needle. The introduction of a flexible 22 gauge needle is facilitated by grasping the needle near its tip. If bone is encountered the needle should be nearly withdrawn and reinserted at a new angle, usually toward the head. When the dura is entered a distinct snap may be felt, but the stylet should be withdrawn at frequent intervals. When fluid is seen in the hub of the needle, the 3 c.c. Luerlok syringe is attached and the required amount of fluid withdrawn and stylet replaced. Mixing fluid with novocain in an ampule is done with a large caliber rustless needle. The injection is made at the rate of about 1 c.c. in five seconds. At completion, withdrawal of a very small amount of fluid assures the operator that injection has been intradural. The patient is then turn on the back, and the table placed in the proper degree of Trendelenburg's position.

A competent anesthetist should administer to the patient's needs and comfort during the operation, give sips of water, apply cold cloths, administer carbon dioxide-oxygen inhalation for nausea, and record blood pressure and pulse at five minute intervals.

POSTOPERATIVE CARE

The Trendelenburg position should be maintained for twelve hours after operation. This includes the transfer of the patient to the cart, and from the cart to the bed. At no time should the patient be leveled or the trunk elevated. This will invariably cause shock; many reactions undoubtedly have been caused by this one mistake.

CONTRA-INDICATIONS TO SPINAL ANESTHESIA

Infection near the site of lumbar puncture and brain tumor are definite contra-indications to the use of spinal anesthesia. Neurotic patients had best have general anesthesia if possible, because of their tendency to ascribe all future pains and aches to the spinal anesthesia.

COMPLICATIONS

Headache occurs in a small percentage of cases during the first three days. This is probably due to increased intracranial pressure and is remedied by retention enemata of magnesium sulphate solution (6 oz. of 50 per cent solution).

Urinary retention and abdominal distention are infrequently encountered; no pneumonia occurred in this series.

The only untoward reaction that can be attributed to spinal anesthesia is that caused by an idiosyncrasy to novocain. Spinal anesthesia is often unjustly blamed for untoward reactions caused by faulty technic, the injudicious use of ephedrin, overdosage of novocain, contaminated or unsterile equipment, overzealous efforts at resuscitation, and vascular accidents, such as embolism and coronary infarction.

Spinal anesthesia has proved safe and satisfactory in a series of 400 cases in all branches of general surgery.

CONCLUSIONS

1. The routine use of the Trendelenburg position is an important factor in safety in spinal anesthesia.

2. The use of ephedrin is contra-indicated in the presence of myocarditis, shock, and cardiac insufficiency.

3. The technic described conforms to new facts in pharmacology and possesses advantages in safety and usefulness.

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Discussion

Dr. J. R. Jowett, Clinton: I have been greatly interested in this paper. Dr. Neubert has presented his subject in a very interesting manner, covering the field thoroughly and leaving little for discussion.

I am much interested in spinal anesthesia myself, having observed and helped in over six hundred cases, and having done over one hundred and fifty myself on patients who ages varied from ten to eighty-one years. On practically all of these cases, spinal novo-

cain crystals were used in amounts varying from 50 to 150 mg., depending on the size and weight of the patient, but chiefly on the type of operation.

A few points which I think are important to consider before giving a spinal anesthetic are: first, to try to determine the approximate length of time of the operation and, second, how high you want the anesthesia to go. With these two points in mind you can more accurately determine the dosage you wish to give. I think it is best always to have your patient anesthetized fairly high, especially in exploratory operations so that he will be under anesthesia for any eventuality. This can be done as stated, namely, by diluting your crystals in larger amounts of fluid and reinjecting the spinal fluid under more pressure, then tilting the patient to allow the novocain to travel to the desired height. When this is reached, the patient can be straightened. Although I have left a patient in the Trendelenburg position during a long operation, and the anesthesia reached to the clavicles and both arms, the motor functions were still present in the upper extremities.

The improvement in drugs used, together with the improved technic, has made spinal anesthesia, in my opinion, the anesthetic of choice, due to the relaxation of the abdominal wall and the quietness of the intestines. Operations for diseased appendix or gall-bladder, the release of intestinal obstruction, or anastomosis operations are greatly facilitated by these conditions. Closure of the wound is also simplified. Intestinal peristalsis is increased, postoperative nausea is minimized, and pulmonary complications are rare.

POSTOPERATIVE ATELECTASIS*

Thomas A. Burcham, M.D.
and
Harry W. Dahl, M.D.
Des Moines

Atelectasis (Acute massive collapse of the lung) is a distinct clinical entity characterized by the airlessness of a lobule, partial or entire lobe, whole lung, or even both lungs. Its primary causative factor is the complete occlusion of a bronchus or a bronchial branch, with the subsequent absorption of the retained air, the involved area being limited to that part served by the bronchus so occluded. The two terms "atelectasis" and "acute massive collapse of the lung" are in common use. Both are correct as to derivation, and both convey the correct meaning. Some writers have objected to the term "collapse," since it was formerly applied to a condition of the lungs found in pneumothorax or pleural effusion. However, in describing either of these latter conditions we write "pneumothorax" or "effusion," as the case may be, collapse being an unwritten part of the idea conveyed. Collapse, as we are speaking of it, occurs independent of pneumothorax, as the lung does not separate from the chest wall. The name "apneumatosis" has also been used to describe the condition, but it is at best an awkward term and conveys no clearer meaning.

The word "atelectasis" was coined by Jorg in 1835 from two Greek words meaning "imperfect expansion." Gairdner, in a series of papers beginning in 1850, carefully described the clinical aspects of the disease. W. Pasteur, in 1890[1], was the first to use the term "massive collapse of the lung." His first observations were on 34 cases of massive collapse following postdiphtheric paralysis of the diaphragm. The relation of the entity to post operative conditions dates back to the 1910 paper of Pasteur[2] and here the real modern conception of the disease began. The early history and literature are admirably surveyed by Bowen.[3]

It should be stated here that while atelectasis has been rediscovered in recent years as a postoperative complication, such limitation of the subject is altogether misleading. A consideration of massive collapse cannot be omitted from any branch of lung diagnosis. Atelectasis may be congenital or acquired. The lungs of the newborn are completely atelectatic. Disturbances may occur in normal inflation at birth from either mechanical or developmental variations, with a resulting failure of a portion of the lung to expand. Atelectasis may occur from stenosis of a bronchus either by pressure from without or obstruction from within. It results only when there is a total obstruction of a bronchus or bronchiole with prevention of the entrance of air into the section of lung it supplies. The air remaining in this segment is rapidly absorbed by the circulating blood and the segment becomes atelectatic.

A third type of atelectasis is the acute massive collapse, occurring most frequently as a postoperative complication in abdominal cases. This study deals more specifically with this group. The purpose of the roentgenologist in writing this paper is not to add anything new, but simply to persuade you to "think" atelectasis, whether you are internist, surgeon, or bronchoscopist, when any question of lung diagnosis arises.

ETIOLOGY

The etiology has been heatedly discussed for over a hundred years. Gairdner, in his series of paper,[4, 5 & 6] expressed the firm belief that the chief factor in the production of the condition was bronchial obstruction, and this has remained the prevailing opinion to date. In the main, two theories are supported: the "nervous reflex"

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theory, and the "mechanical occlusion of a bronchus by bronchial secretions."

There is very little support for the contention of Pasteur that the condition is caused by paralysis of the diaphragm or reflex paralysis of the chest musculature. The early work of Pasteur concerned postdiphtheric phrenic palsies of children, and he found atelectasis, usually bilateral, at many autopsies. However, experimental workers have failed to produce the condition, and clinical workers have denied that the diaphragm is paralyzed. The high position of the diaphragm noted in atelectasis is apparently a defense mechanism, and is maintained even after the involved lung has been completely reinflated.

Two other reflexes must be considered seriously: reflex by way of the vagus which directly affects the lung and may thus cause collapse, and a vasomotor reflex, causing an increased outpouring of secretion into the bronchial tree, or some other circulatory change which might conceivably produce atelectasis. The condition has not been produced experimentally by any nervous mechanism, but such a negative argument must not be considered significant. The work of Dixon and Brodie[7] strongly supports a vagal reflex theory. They concluded that the bronchoconstrictor fibres run in the vagus only and contraction of the bronchioles may lead to collapse or overdistension of the lung, depending on the force of inflation on the one hand and the time allowed for deflation on the other. Typical bronchial constriction immediately follows vagal stimulation in the dog and rabbit. The cases of contralateral collapse after minor injuries are most easily explained by some type of reflex, perhaps vasomotor.

There is an overwhelming array of evidence, both experimental and clinical, favoring the theory of bronchial obstruction as the prime factor in the production of pulmonary atelectasis, whether it be postoperative or not. In 1878-1879 Lichtheim conducted a number of remarkable experiments, obstructing the bronchus in rabbits by introducing a laminaria plug without opening the thorax. As the plug swelled, the lung collapsed. The collapse did not occur with section of the phrenic nerve and spinal cord at the second and third cervical segments. MacCallum[8] in 1908 had a student introduce a pea into the bronchus of a lobe of a dog's lung, impacted to obstruct the flow of air into the lobe. At autopsy the lobe was found to be atelectatic and the bronchus behind the obstruction was filled with thick mucus. More recent work is that of Coryllos and Birnhaum,[9] who produced atelectasis by plugging the bronchus with a rubber balloon. Lee, et al,[10] produced massive collapse of the lungs of a dog by obstructing the bronchus with tenacious bronchial secretion removed from the bronchial tree of a patient with massive atelectasis. The first to stress the importance of obstructing bronchial secretions in postoperative atelectasis were Elliott and Dingley,[11] who studied very carefully eleven cases of postoperative collapse. They noted a viscid mucopurulent expectoration in all cases, different from the sputum found in pneumonia. The fairly unanimous acceptance of the mucous secretion plug theory is reflected in the masterly work of Mastics, Spittler and McNamee,[12] whose conclusions are quoted below:

"1. Physical examination of patients immediately following operation and at various intervals thereafter has shown that atelectasis does not occur until several hours have elapsed. This argues against the sudden production of atelectasis by means of a reflex vagus mechanism and shows that time must elapse during which there is an accumulation of mucus leading to bronchial obstruction.

"2. In a number of instances we have been able to anticipate the development of atelectasis in patients under anesthesia, who gave evidence of increased secretion in the respiratory tract. We have applied the term 'wet patients' to these cases.

"3. The finding of mucus plugs by Jackson and Lee in two cases at necropsy, and the demonstration of such plugs in vivo. Nearly all observers have noted the presence of mucopurulent expectoration.

"4. Reinflation of the atelectatic lung following bronchoscopic aspiration of the mucus, as described by Tucker and Manges.

"5. Recurrence of atelectasis following reaccumulation of mucus in the bronchial tree, in amounts sufficient to produce obstruction. The cycle of secretion-obstruction-atelectasis-aspiration-reinflation has been completed seven times in one case reported by Hearn and Clerf. It would be difficult to explain this phenomenon on the basis of stimulation of the vagus."

Reviewing, therefore, all the arguments concerning the etiology, we must say that at present bronchial obstruction is the most important single factor we know, but it is not the only factor. There are certain phenomena, preoperative, operative and postoperative, which either alone or in combination with bronchial obstruction, aid in the production of atelectasis or play part in initiating the process.

Preoperative. The time of year may play some part in the incidence of pulmonary complications. Ravdin and Kern[13] found a definite increase in

pulmonary complications in the winter and spring; Dyke and Sosman,[14] in describing fourteen cases of postoperative collapse, stated that ten occurred in the first three months of the year.

Preoperative medication may affect the respiratory rate, the cough reflex, bronchial secretions and intrapleural pressure, all of which may be important in initiating the pulmonary complications. For example, it can be shown that atropin causes a definite swing of intrapleural pressure to the positive side; what part changes in intrapleural pressure play cannot be stated definitely, but it is a well known fact that atelectasis is very common in children, in whom there is less negative pressure than in adults. Bowen[3] is very positive in his belief that the use of morphin and atropin preoperatively has a "real etiologic relation to the occurrence of massive collapse." It can hardly be doubted that many postoperative pulmonary complications have been due to unwise medication abolishing the agencies by which secretions are normally removed from the air passages.

We must also consider the length of time and position in which the patient is kept in the hospital previous to surgery. Schaack[15] reports that a group of patients in the hospital for two weeks or more had four times the incidence of postoperative pulmonary complications, in comparison with a similar group in the hospital for only two or three days. He further noted a definite decrease in the incidence in both groups when pulmonary exercises were induced.

Finally, the existence of previous pulmonary disease, particularly bronchitis, may play an important part. Either latent or active, few people living in the temperate zones are wholly free from nasal and pharyngeal catarrh and bronchitis. The factors necessary to produce an acute bronchitis are ever present; every precaution to conserve and strengthen the protective forces of the body should be exercised, particularly during the twenty-four to forty-eight hours before and after surgery.

Operative. There is no definite evidence that the time the patient is on the table has any marked effect on the production of atelectasis. The part played by the anesthetic is difficult to judge, since all observers agree that the complication is as frequent under all types of anesthesia. In a series of 456 operations reported by Brunn and Brill,[16] spinal anesthesia was used in 62 per cent of their cases, with a resulting sixteen cases of atelectasis; gas in 23 per cent with two cases of atelectasis; and ether in 9.2 per cent with three cases of atelectasis. Statistics bear out the great preponderance of abdominal operations as forerunners of the disease, those on the lower abdomen being more frequently so than the upper. The condition occurs very rarely after operations for intracranial neoplasms. The surgical procedure itself may have an effect upon the physiology of the chest, as traction on the mesentery or abdominal organs, evisceration, etc., effects the respiratory rate and intrapleural pressure. Posture is the really deciding factor as to site of collapse, since if the patient lies on one side continuously during operation, then collapse, if it occurs, comes on the restricted side.

Postoperative. Here again the effects of medication may be mentioned; every effort should be made to strengthen the protective forces instead of destroying them. The most important factor, however, is the position of the patient, and frequent postural changes will do much to decrease the incidence of the condition. There are two important posture effects to consider: first, the effect on the respiratory rate and movement and vital capacity; and second, the effect of position on intrabronchial secretions. Fowler's position is the most ideal in affording the least impediment to free respiration and increasing the vital capacity. It has been shown that the secretions may easily pass from one lung to another, or that they may gravitate within one lung to different lobes. We believe that it is important, by means of proper posture, to drain the lobes into the trachea after operation, and this can be done only when one is familiar with the anatomy of the bronchial tree.

INCIDENCE

The incidence of atelectasis is difficult to determine. The complication is freely admitted in some hospital reports, but absent in others, possibly because the surgeons have not "thought" atelectasis. It has been estimated by various workers that postoperative pulmonary complications occur in 3 to 7 per cent of all surgical cases, with atelectasis forming approximately 70 per cent of these.

DURATION

The duration is so variable that it requires much further observation for an accurate conclusion. Cases have completely cleared within a few hours, while some observers have followed the condition for as long as four weeks.

SYMPTOMS AND PHYSICAL SIGNS

The onset of atelectasis occurs usually within twenty-four to forty-eight hours after operation, though intervals of one week to ten days have been reported. It may be mild or stormy, but in either event there is a rise in temperature (usually not higher than 102 degrees F.), increase in number of leukocytes, rapid pulse and rapid respiration.

In the fulminating type there is extreme cyanosis, marked dyspnea and thoracic pain, and the patient appears to be in extremis. A lessening of these urgent symptoms usually takes place within a few hours. Cough is suppressed in the early stage. Expectoration is scanty at first, "gum-drop" in appearance, thick, viscid, tenacious, dirty yellow in color; it becomes mucopurulent as the acute symptoms subside and very profuse, so that the term "recovery by expectoration" is used to designate the crisis of recovery.

The physical signs are notoriously uncertain, being modified by the location and size of the collapsed area, and changing rapidly. There may be considerable discrepancy between the signs elicited and their correct interpretation; typical signs will be found only in typical cases.

On inspection, the patient lies on the affected side, or inclines toward it. In severe cases there is marked respiratory embarrassment; cyanosis (usually described as brick-red), labored inspiration, hyperpnea, a respiratory rate ranging from 40 to 60 per minute, and marked dilatation of the alae nasi. The patient appears extremely ill. Depression of the intercostal spaces can be noted if the patient is of slender build, as may also fixation of the diaphragm. With only a small portion of the lung collapsed, one may see no variation in size or movement between the two sides of the chest. The diaphragm is high and immobile on the affected side. Palpation and auscultation confirm the displacement of the heart and localize the point of maximum intensity. Tactile fremitus may be decreased or unaffected, depending on whether the obstruction itself or the signs transmitted from a neighboring patent bronchus predominate. The percussion note will be either dull or flat on the affected side, with hyperresonance on the normal side. The findings in the lungs may be: (1) signs of obstruction, with suppressed or merely diminished breath sounds, decrease in density or absence of whispered and spoken voice, and a few fine rales; or (2) signs of consolidation with tubular breath sounds, and increased whispered and spoken voice.

The above physical signs may be present at onset or during the actual course of actelectasis. When the obstruction is relieved and the patient is coughing up a good deal of mucoid material, rales of all types are heard and the breath sounds become harsh.

The Roentgen-ray is an important aid in the physical diagnosis of atelectasis. The film is distinctive and highly diagnostic. The lung when collapsed occupies a smaller space than when fully expanded and is therefore increased in density. To compensate for the collapse, the chest wall is depressed, the heart and mediastinum are drawn over toward the involved side, and the diaphragm occupies a high, fixed position. The density of the lung is fully as great as in pneumonia and is due to the engorgement of the blood and lymph vessels. As explained by Sante,[19] there is an active potential vacuum sufficient to depress the intercostal muscles, elevate the diaphragm and displace the heart and diaphragm. Partial relief can be obtained through the vascular system. The blood and lymph channels become engorged as readily as do subcutaneous channels in "dry cupping." When the vacuum is relieved by aeration, the congestion disappears and so does the density. The consolidation is homogeneous. When an entire lung is involved, there is marked cardiac displacement. With a single lobe involved, there may be no displacement of the heart due to emphysema. Involvement of an upper lobe alone usually causes tracheal displacement only. A summary of the Roentgen-ray findings may be tabulated as follows:

		Affected Lung	Normal Lung
1.	Density	Increased	Decreased
2.	Heart and trachea	Displaced toward	Displaced from
3.	Diaphragm	Elevated	Depressed
4.	Intercostal spaces	Decreased	Increased
5.	Costophrenic excursion	Decreased	Increased
6.	Vertebrae	Curved from	Curved toward

PATHOLOGY

The pathologic material is scant because death is rare in this condition, and when it does occur, the primary condition of collapse has been so altered as to give little real information. Grossly, the lung appears red, like dregs of wine; the lobular divisions and interstices are apparent; the margin of the lesion is lobular; there is no evidence of pleuritis; the lung is smaller than normal, nonaerated, but soft and pliable; inflation causes expansion to normal appearance; and thick, tenacious mucus can frequently be found in the bronchi. Microscopically, the alveolar cells are closely packed together, swollen and hydropic. The capillaries are dilated and congested. The smaller bronchioles are collapsed; the larger ones are of normal caliber.

DIFFERENTIAL DIAGNOSIS

The disease is most commonly confused with lobar pneumonia. The two conditions have so much in common that Coryllos and Birnhaum[17] state that "lobar pneumonia is a pneumococcic atelectasis due to bronchial obstruction by mucous exudate infected with virulent pneumococcus. Atelectasis (generally but not always a postoperative pulmonary complication) is due to bronchial obstruction by mucous exudate usually infected with pneumococcus Group IV, an organism of low virulence." Pneumonia may frequently be related to collapse as an antecedent, complication,

or sequel, but whether an even more important relation exists will require further observation and research to determine. Undoubtedly collapse plays a very important role as a complication of pneumonia. Due regard to the physical signs, particularly the displacement of the heart and mediastinum and the contracted lung, together with the absence of the rusty or bloody sputum, will usually aid in the decision. Uncomplicated pneumonia causes no displacement of the heart, but occasionally during the resolving stage, retraction of the trachea may occur, due to development of atelectasis in the resolving lung from blocking of the main bronchus by secretions. In pleural effusion, displacement of the heart and mediastinum is away from the involved side, as a rule. However, previous infection may have caused a fixation of the mediastinum, but even then retraction toward the involved side would not occur. Very seldom is there enough scar tissue around an effusion to cause retraction of the trachea.

Tumor occluding a bronchus cannot be excluded from the diagnosis except by bronchoscopy. Tumors of the lung may reach enormous proportions, but usually cause displacement of heart and mediastinum away from the involved side. Retraction toward the involved side is possible if there is an associated atelectasis from occlusion of the bronchus.

Bronchopneumonia offers a real problem in the diagnosis of atelectasis. During the stage of reinflation, when the structures have been replaced, there still may be areas of atelectasis in the lung which may be impossible to differentiate. However, collapse is unilateral, and bronchopneumonia is usually bilateral.

Chronic interstitial pneumonia (chronic diffuse fibrosis of the lung) causes retraction toward the involved side. The condition is chronic, usually following some suppurative condition in the chest, scar tissue pulling the mediastinum over and exerting traction on the walls of the bronchi, causing bronchiectatic cavities to appear. These cavities can be seen clearly through the consolidation and never occur in association with collapse. If there is any doubt as to the cause of the consolidation, a safe diagnostic procedure is to roll the patient over upon his uninvolved side and cause him to cough. An atelectatic lung without mechanical obstruction should immediately reinflate; consolidation from any other cause will be unaffected.

PROGNOSIS

Postoperative atelectasis is rarely fatal in itself. Simultaneous bilateral collapse would, of course, be incompatible with life, and as such has probably never been diagnosed before death. With proper treatment, practically all clinical evidence of the condition will disappear in forty-eight hours. An elevated diaphragm and slight displacement of the mediastinal structures may persist for a long period of time, but are of little importance.

TREATMENT

Since there has been developed a definite etiology for atelectasis, a logical preventive and curative treatment can be instituted. Prophylactic treatment consists of: (1) hyperventilation of the lungs during and immediately after operation with carbon-dioxide plus oxygen, as advocated by Scott and Cutler,[18] by which means they have reduced the incidence of collapse by 75 per cent; (2) change of position every six hours after operation to prevent the accumulation of secretions in the dependent portions of the lungs; (3) the curtailment of postoperative sedatives, particularly those depressing respiration.

Active treatment is (1) postural and (2) bronchoscopic. Postural treatment, as first advocated by Sante,[19] is simple, safe, and can be instituted by anyone anywhere. It consists of turning the patient so that the sound of lung is dependent (involved lung uppermost), the patient being in the horizontal position. He should be kept in this position a short time, asked to cough, and to breath deeply. Slight manual percussion over the involved area, or gently rolling the patient from side to side, may help in raising the mucus. Change in position must be frequent.

Should postural changes fail to produce reexpansion, bronchoscopic examination should be resorted to in order to detect any mechanical cause for the collapse.

In all cases requiring diagnosis of apparent lung involvement, following operation, atelectasis should always be considered, rather than the conditions formerly known as "ether pneumonia," "pneumonia from anesthesia," etc. If the condition is recognized early, very simple treatment, as described above, will usually bring immediate relief, while if not recognized, delay may lead to such serious complications as lung abscess. May we again urge that the physician, the surgeon, or the radiologist learn to "think" atelectasis.

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SOME FACTORS THAT PROLONG LABOR*

JAMES F. TAYLOR, M.D., Sioux City

The number of delayed labors has not declined sufficiently to make us confident that we are paying due attention to the factors that cause these delays. There is a need of constant repetition of principal facts in all branches of medicine, for we seem to forget more than we remember. Errors in diagnosis and treatment are equally attributable to carelessness. For these reasons, I wish to review some factors which quite frequently cause delayed labor.

The placenta, when malplaced, offers some of the most difficult problems that the obstetrician is called upon to solve. Misplaced placentas always delay labor. The literature is abundant on placenta previa and abrupto placenta, but little is written about misplaced placentas. I propose to emphasize some facts observed in women with low misplaced placentas. The placentas under discussion can be classified according to their position as low posterior, low anterior, low lateral and those having their attachment over the left horn, with the larger portion lying anteriorly.

The incidence of the various misplaced placentas is seen from the following figures: in 1,250 consecutive cases, the low anterior placenta occurred 24 times, the low right occurred 16 times, the low posterior at or near the promontory 33 times, the low left 60 times, and that over the left horn anterior, twice. Of this entire series of 135 cases, all but 12 were observed in primiparas, the balance having occurred in women with the second child.

In women with the low anterior placenta, the uterus is usually found to occupy the median line. The majority of the babies in these cases are seen in the occipital position with the occiput resting immediately over the symphysis, the forehead pressing against the center of the promontory. With the low lateral placenta the uterus is in the oblique position as labor grows stronger and more pronounced, if the membranes have ruptured; the same position of the uterus is seen in cases with the low posterior placenta, with few exceptions, when the uterus occupies the median line. Rarely, as pains grow more intense, the right or left occipital posterior is shifted to a direct posterior, with the back of the neck directly over the promontory. In these cases the child is usually lying on its back when the mother is in the prone position.

In considering the importance in delay of labor of the pathologically low placenta, one must take into account certain known physiologic facts of normal labor. The amount of blood in the intervillous spaces is estimated at about 250 c.c. to 300 cc., depending upon the size of the placenta.[1 and 2] When contractions of the uterus take place, the base of the placenta shrinks, causing a bulging of the placenta into the uterine lumen. The normal physiologic position of the child in the uterus at term is the right or left lateral, with the knees of the child resting against the placenta, provided the latter is normally situated. When the placenta becomes engorged during the contractions, it pushes against the child's knees and tends to swing the buttocks upward as the back approaches the median line. In the normal mechanism of labor this movement plays an important rôle in the process of dilatation of the cervix as well as forcing the child's head into the pelvis as a result of the fetal axis pressure. This mechanism is especially important in primiparas and those multiparas where there is little amniotic fluid, since in those latter cases the amniotic fluid is not sufficient to surround the baby during the uterine contractions.

In the normally placed placenta, the less amniotic fluid that is present in the uterus, the more pronounced is the engorgement of the placenta with sinusoidal blood, which prompts the dilatation at the outlet, with birth taking place in a much shorer time. Even in these cases, if the membranes have ruptured early (what is termed dry labor in primiparas), contraction rings appear about the neck; these rings retard the shoulders and prolong labor, with intense suffering to the woman.

In the misplaced low lateral placenta, the engorgement of the placenta proceeds more freely

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because the child's knees do not rest against it and it soon forms a spherical mass bulging into the uterine lumen. This mass tends to hold the child in whatever position it is found at a given moment and thus prevents the head entering the pelvis. Such a delay is especially frequent in those cases with a low lateral placenta in which the membranes have ruptured early. In such a delay, the child is usually found resting upon its back in the iliac fossa, causing the right or left oblique position of the uterus. In those cases where the amount of amniotic fluid is not sufficient to fill all the spaces in the uterus, one may observe that during the uterine contractions the fluid is forced over into a single compartment of the uterus, producing a localized bulging which may be felt clinically as a cystic mass and which has erroneously been described as such by some authors.

In the cases of misplaced low posterior placenta, when the lower edge is found at or near the promontory, the position of the child is usually in the right or left occipital posterior position with the shoulder resting against the placenta. As the contractions advance in severity, the shoulder becomes more firmly impacted in the placenta, in this way prolonging labor. In the majority of cases of low posterior placenta, the baby is found on its back and in this position, the bulging placenta elevates the body so that the upper edge of the child's sternum is forced against the pubic bone, thus delaying labor. With the pains growing more severe, we notice blood coming out of the vagina with each contraction. After the membranes rupture, the head becomes more extended, loops of the cord are usually found about the neck and ears and the feet are down even with the chin of the infant.

In the low anterior position of the misplaced placenta, the uterus is found to occupy the median line with the back of the child's neck resting on the promontory. No advancement of the child is noticed for a long time. When the membranes rupture and the pains grow more intense, the bulging placenta holds the body firmly. In two cases of this series the back of the child was anterior, the occiput against the placenta and pubic bone and the forehead resting on the promontory. This was the most distressing case of any in the series.

SUMMARY

In the low lateral placentas the amniotic fluid, if of sufficient quantity, holds the baby in the occipital position with the back against the opposite wall of the uterus. When the membranes rupture early, as is usually the case, the bulging placenta takes the place of the fluid in holding the child in the same position. The same condition occurs with the low posterior or low anterior placenta. In the cases with the placenta over the left horn, delivery is more readily handled, unless the child is large.

In most cases, the membranes rupture early, making delivery difficult. The most difficult is the low anterior position with the child's back in the median line, the occiput embedded in the placenta and the forehead resting on the promontory. This is also most dangerous for the life of the baby, whether forceps are used or version attempted. Serious injury to the bladder of the mother is apt to take place. Delivery of the baby in the other positions of the placenta should not be dangerous to either mother or child, if the diagnosis is made early and the child delivered as soon as the dilatation of the cervix will permit. This depends on the accoucheur, his familiarity with the conditions and his judgment in selecting the form of delivery best suited to the particular case.

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Discussion

Dr. Dellivan M. Fuiks, Manchester: Those things that enter into the delaying of labor are certainly so numerous that they cannot be taken up in this length of time. I think the latest idea of obstetricians is that uterine inertia causes perhaps the greatest number of delayed labors. I believe that this is being recognized more at the present time. Displacements of placenta are very interesting, but I do not believe that many of us recognize them or even look for them unless we see some symptoms of bleeding and shock, or unless we can feel the large round ligaments which show whether or not a placenta is anterior or posterior.

I remember two cases which were very interesting to me, one in a multipara who had a normal labor, but after the second stage was completed there was a large mass in the abdomen. We thought of multiple pregnancy but this was ruled out. After about one-half hour, a very difficult delivery of an ascitic placenta occurred, this placenta weighing fourteen pounds. That is the only one of this type I have ever seen.

There was another interesting case of placental misplacement. This placenta was probably misplaced at least five miles. The patient was a colored woman. She was in shock. She had been under anesthesia for approximately eight hours, more of an analgesia, I should say. There was a prolapsed cord, tied with a piece of ordinary string. The lady was in such profound shock that she died within a very few minutes after she got into the hospital. At post mortem examination we found no placenta whatsoever. That was a rather rare and unfortunate case.

At the inquest, the colored doctor who took care of her said, "Well, boss, I didn't have enough room to do

a version and I thought if I took out the placenta I might have more room to work."

Another thing which we do not pay much attention to, perhaps, but which is quite common is in multiparous women who have a thick, tough cervix which dilates rather easily but does not thin out. Often you will find a thick anterior lip, which can be pushed up between pains and the head proceeds without further difficulty.

I think Dr. Taylor has written an excellent paper. It was a difficult paper to write, there being so many different types of dystocia.

Dr. A. L. Nielson, Harlan: I believe that the two most important factors in the prolongation of labor are the persistent posterior position of the occiput and failure of cervical dilatation. These two conditions are frequently associated and together furnish the complication in the majority of prolonged and difficult labors. Another associated factor is secondary uterine inertia which commonly follows delay in the progress of labor, as the uterine muscle becomes worn out by its unsuccessful efforts.

Malpositions of the placenta are of importance as a primary cause of delayed cervical dilatation, persistent occiput posterior position and secondary uterine inertia. The mechanism whereby low-placed placentas delay cervical dilatation and dispose to occiput posterior positions has been very nicely shown by Dr. Taylor. We do not usually appreciate how the engorged placenta adds to the hydrostatic pressure which promotes cervical dilatation. It can readily be seen how a mass the size of the full-term placenta lying in the lower part of the uterus, just above the dilating lower uterine segment, might and would be sufficient to influence the position of the presenting occiput.

The occurrence of the misplacements of the placenta in more than ten per cent of patients is a surprise and I am sure that I have failed to recognize the condition except in a few cases.

In the management of these cases one would necessarily have to disregard the placenta as the cause of the delay, and interference must be based on the usual obstetric indications. I should like to ask Dr. Taylor in what per cent of his 135 patients spontaneous labor took place. I want to thank the doctor for contributing this basic information to the subject of prolonged labor.

Dr. James F. Taylor, Sioux City (closing): Dr. Nielson asked me in how many of these cases spontaneous labor took place. There was none. I presume if the labor had been spontaneous I would not have known whether the placenta was misplaced or not.

About ten or twelve years ago, in my consultation work, I first commenced investigating the cause of delayed labor. Sometimes I would be called in at the last minute and would be confronted with these conditions. Once in a while I would use the forceps unless I had to place them high. I do not believe in high forceps. Then my hand was carried within the amniotic sac into the uterus, and felt the placenta.

I do not believe in going in blindly and using forceps without a reason. I first find out how things are situated within the uterus. Low misplaced placentas have occurred 135 times in 1,250 consecutive cases of labor. Consequently none of the 135 births was spontaneous.

THE HANDICAPPED CHILDREN'S SECTION OF THE WHITE HOUSE CONFERENCE*

MAE HABENICHT, M.D., Des Moines

Until the first White House Conference was held twenty years ago, there was little understanding of the work of the various child caring agencies or comprehension of the magnitude of their problem. Certainly no recognized standards of care had been established for these children. At that time we began to gather information in order to establish or disprove the value of the work being done.

During the last twenty years child caring agencies have grown in number and in the effectiveness of their work. At the same time it has been increasingly evident that if the needs of all children are to be met adequately, we must have great expansion and improvement in our public services. These last twenty years show real progress in the organization of public service. The effectiveness of county organization of both our health and social forces has been demonstrated. We are now ready for the successful expansion of these forces.

Among the great gains reported is that of caring for over 200,000 children in their own homes by mothers' pensions, who in 1909 would have been separated from their mothers. It has also been reported that more than 122,000 babies survived in 1929 who would have died in 1909, and the maternal mortality rate has been started downward. There are many other gains that could be reported but with all these, we cannot ignore the fact that there are millions of children suffering from very real handicaps. We are all agreed that there should be no socially handicapped children in the United States, and yet there are more than 500,000 children who must look to the community for care and maintenance, and more than 200,000 were dealt with in our juvenile courts last year. We must also consider the hundreds of thousands of others who are on the road to dependency and neglect, and who will finally fill our jails and almshouses.

*Presented before the Thirty-fourth Annual Session of the State Society of Iowa Medical Women, Des Moines, May 12, 1931.

If we could put into practice what is now known about preventing dependency and delinquency, and provide opportunities for wholesome group activities, "we could in a single generation profoundly improve the whole character of our national life."

STATE AND LOCAL ORGANIZATIONS

Child welfare work today is based on certain cardinal principles:

"First, the need for national, s tate and local organizations for the handicapped.

"Second, the duty of the government to assure to every child proper protection and support and opportunity to develop to his fullest capacity; to safeguard family life in so far as possible from economic disorders.

"Third, the need for an organization of public and private social work that will ensure early discovery of all handicapped children, and the provision of needed care and service close at hand as long as the need lasts.

"Fourth, the need of sufficient funds provided by the government and private agencies to meet the needs of any handicapped child in the proper way.

"Fifth, the need for a minimum standard of service to which all public and private child welfare organizations must conform; and the need for a coordinated program of child welfare in every state and community in which each public and private agency has a definite place."

These principles of child care may receive general recognition in theory but they are by no means universally accepted in practice. All children in need of care will not receive the necessary service until there is a more general acceptance and practice of the fundamental principles of modern child welfare work.

"The federal government must, of course, be at the top of the pyramid, stimulating the states to more effective child care through research, advice and the dissemination of sound principles. The state, on the other hand, must be responsible for the dissemination of these same standards through its local channels."

It is both possible and desirable to establish in the public mind a minimum beyond which any state may rise as far as it will, and below which it falls at the peril of common disapproval. The development of standards is an evolving process as new needs appear and should be carried on by the federal government in cooperation with the states. These defined standards and rights of childhood may be accepted as a "national minimum."

A State Welfare Department, preferably with a division for the various services needed for handicapped children, is the best means of establishing control of standards of care. Constructive development of these services depends upon leadership from an organized department of child welfare acting on knowledge of conditions in the state. Unless the state sets minimum standards below which no child welfare agency is allowed to fall, many children will fail to receive the protection and support which is their right.

An understanding of the professional aspects of the work is necessary in order to demand the continuation of service that has proved valuable, to improve standards, and to prevent partisan interference in state work.

"Appropriations for the state's child welfare activities should be adequate in order to make social legislation effective, since mere legislative enactment is not sufficient."

"A state department should maintain adequate standards in reference to qualifications and size of its staff in relation to the work undertaken, and to the quality of its service."

The state's responsibility includes leadership and educational duties, with sufficient legal powers to make its supervision effective. When juvenile courts act as general child welfare units, the state welfare department should be given authority to establish for them standards of case work on the same level that is required of other child welfare organizations. In addition, the state is responsible for educational publicity to inform its people of standards for child welfare, and to develop public opinion in formulating legislative programs. Whatever system is established, it must not slight its important responsibilities in promoting programs of prevention and protection, in supervising all child welfare institutions and in participating in the settlement of interstate problems.

THE PHYSICALLY AND MENTALLY HANDICAPPED

"There are from 3,000,000 to 5,000,000 children in the United States who are 'handicapped'—in the sense in which the term is here used, i. e., children who are blind or partially so, deaf or hard of hearing, crippled, mentally deficient or diseased, or who are suffering from tuberculosis, parasitic, or cardiac diseases."

"What is society's obligation to this army of handicapped children? What steps should we take on their behalf? The last decades are witnessing the dawn of a new point of view on this question." Like other children, the child who may have some physical or mental handicap, is to be regarded as a *potential asset* and not a liability. Their needs in general are the common needs of

all children, and demand a twofold program; (1) direct care, (2) prevention.

1. "The needs of the handicapped should be met by the local community as far as is practicable, and the medical and social care and treatment provided should equip them to participate as fully as possible in the normal life of the community."

2. "For the physically or mentally handicapped child in need of temporary institutionalization, the institution should provide treatment, care and training of maximum effectiveness in bringing about the child's early rehabilitation and restoration to community life."

3. "For the physically or mentally handicapped child in need of permanent institutionalization, the institution should provide adequate treatment, well-rounded custodial care, and training which utilizes the child's mental or physical abilities to the best advantage during his institutional life."

A preventive program should provide:

1. "Machinery through which deviations from the normal and the healthful, in every child, may be recognized as early as possible, and proper medical treatment and effective social remedies instituted."

2. "Machinery through which the concept of positive health may be promoted and every child imbued with the idea of physical and mental health."

Since the requirements of the blind and the partially seeing child differ considerably, it is essential that the distinction between them be kept clearly in mind. Only the roughest estimates can be given concerning the number of these children in the United States. For the blind the best estimate seems to be 15,000 and for the partially seeing, 50,000. Research was recommended as a fundamental step in the formation of any program for the treatment of the deaf and hard of hearing as well as the blind and partially blind.

The crippled children in the United States are estimated at about 365,000. This problem is fundamentally the responsibility of the state. A complete state program includes a plan to:

1. "Continuously locate them promptly."

2. "Provide early expert orthopedic and medical diagnosis."

3. "Secure high quality medical and surgical care, as near the homes of cripples as possible."

4. "Provide the several special therapies, aftercare and follow-up services and the training of parents of crippled children."

5. "Obtain adequate appliances and braces at reasonable costs."

6. "Furnish special education in the regular public and private schools, special schools and classes, hospitals, and family homes."

7. "Insure adequate vocational guidance and training."

8. "Place cripples properly at employment."

9. "Cooperate in all efforts to prevent the causes of crippling."

Such a program is now developing in a number of states but no two states can be expected to use identical programs.

The Problems of Mental Handicap. The incidence of mental ill-health among children and adults has not been known.

"In early childhood—even as early as four years of age—about one-third of apparently normal children of self-sustaining families of average intelligence, have behavior problems sufficiently marked to necessitate treatment. To be sure, behavior problems do not by any means indicate future "insanity," but by far the greater number of functional disorders are first evidenced by apparently minor disturbances in childhood. In all such cases, prevention of later disorders is a matter of proper treatment during the very early stage.

"The frequency of disturbances in mental development at early ages is not revealed by admissions to hospitals for the mentally ill. Mental illness requiring hospital care develops slowly and there is marked reluctance to commit children to such hospitals. However, statistics gathered show an increasing admission rate to hospitals for mental diseases during the past ten years, of individuals under twenty years of age. The bulk of these occurring in the age period of fifteen to eighteen belong to the so-called "functional" groups, in which organic factors have not, so far, definitely been found. They constitute a real challenge to preventive as well as remedial work.

"When the older population is considered, a truer picture of the real situation is obtained. There are, in mental hospitals, 250 patients over fifteen years of age, for each 100,000 of the general population; 80 per 100,000 population are admitted each year, 70 of these for the first time. Moreover, the large number now confined in such hospitals, a total of almost 300,000, by no means includes all persons in obvious need of hospital treatment, since recognition is often slow and the facilities in many states grossly inadequate."

In some states the chance of individuals being committed to hospitals for the mentally ill is about 1 in 20 and the chance of developing a psychosis or severe incapacitating neurosis is about 1 in 10.

"Children who are physically or mentally handicapped constitute a large social, as well as an economic problem. Such children possess aptitudes and abilities, which if developed through a constructive program, will enable them to carry

wholly or in part their own social and economic weight.

"To meet the needs of the mentally handicapped requires a high degree of cooperative effort on the part of the medical profession, social and health workers, educational authorities and employers whose services should be coordinated and directed, so as to provide:

1. Early discovery and diagnosis.
2. Curative and remedial treatment.
3. Social contacts.
4. A differentiation of education, with "vocation" an important aim.
5. A service of educational and vocational guidance.
6. Pre-vocational training.
7. Vocational training.
8. Placement in employment.
9. Follow-up in employment.

"The program for meeting the needs of the physically and of the mentally handicapped children includes:

1. A central state coordinating agency.
2. Creation of constructive attitudes.
3. Development of employment opportunities.
4. Protective legislation.
5. Promotion by private agencies and industry.
6. Promotion by the national government."

THE SOCIALLY HANDICAPPED; NEGLECT AND DEPENDENCY

The most striking declaration of the 1909 White House Conference was: "Home life is the highest and finest product of civilization. It is the great moulding force of mind and character. Except in unusual circumstances the home should not be broken up for reasons of poverty." After twenty years' additional experience, study and reflection, it is still one of the fundamental principles of social work.

The Federal Children's Bureau was established by Congress in 1912. To every person dealing with children who wished to do wiser and better work the children's bureau has been an agency to which he could turn for reliable data and expert information.

The Child Welfare League of America is the type of national unofficial agency for the promotion of better care of dependent children suggested in the 1909 conference. Other national groups, Catholic, Protestant, and Jewish, are also promoting better standards.

"Rooted in the past and reinforced in the present are those basic human relationships which come to their full flower only in the family. The family is the source and center of our most profound emotions and our most treasured traditions. Here are those contacts and interweaving of personalities which mankind instinctively craves. Individuals may seek escape therefrom, but as a rule, only to establish soon, other family groups or relationships. The family in its present form has been deeply influenced by countless ages of search for the best way of living. Its paramount importance in any program for the well-being of children is accepted by every group and class, and must be unless and until we disavow our fundamental philosophy of life.

"Where the essentials of family life exist, even incompletely, every effort should be made to keep the child with his own mother and father. Their home is his rightful place. The sense of 'belonging' meets one of his own fundamental needs: he feels himself secure, a part of a stable and resourceful family group, in a world of strangers and dangers.

"The family does not lose its value by reason of the fact that every family has its difficulties and limitations. There is no one fixed pattern of a family. Family life is an achievement of the highest order. Its values become more potent, refined and effective as the years pass. An individual family is not static. Resourceful and understanding social service, together with material aid when necessary, will nearly always enable parents who are in difficulties, to increase the richness and stability of their family group and its beneficent influences upon their children."

As a means of fostering this family spirit, several definite programs have been established.

Last year thirty-three states whose figures are available spent more than $30,000,000 keeping, by means of mothers' aid legislation, an average of some 220,000 children with their mothers. It is difficult to comprehend fully the significance of this. Many thousands of children, except for this aid, would have been taken from their homes. A majority of the mothers would have attempted to support their children under severe strain and poverty. The cost of this is paid later in inefficiency, ill health, and personality and behavior problems, which always follow when a mother without resources strives to be both bread-winner and home-maker for a family.

Forty-four states have some mothers' aid legislation. Adequate relief, based on a well-considered family budget, is an ideal realized in only a few localities. Home relief at the expense of the taxpayer, cannot always compete successfully when free care is available away from home or large state orphanages are maintained. We are still far from realizing a full application of the principle that poverty alone should not remove a child from its parents.

Children born out of the marriage relation constitute another distinct problem. The extent of this problem is indicated by the following figures: In forty-two states there was one illegitimate birth for every thirty-five of the total population; one in sixty-one for the total white population.

"Agencies doing constructive work for unmarried parents and their children, recognize that a sensitiveness to the whole human situation of the father, the mother and the child in relation to their social and physical environment is essential. Social treatment has to be adapted to the individual need and situation. Hasty and ill-considered separation of children from their mothers causes unnecessary hardships.

"Marriage for the purpose of giving the child a name, when not based on mutual respect and affection, and when there is no desire or intent on the part of the parents to live together as married people, tends to complicate rather than to simplify the situation, and therefore, rarely offers a solution. Unmarried parents, as other parents, should take responsibility for their child. Whenever possible, provision should be made so that the child can stay with the mother, particularly during the nursing period. If circumstances are such, however, as to make it impossible or undesirable to have the child in the immediate custody of the mother, other practical provisions may be made, but the mother should be helped to take, to the limit of her ability, the responsibility of planning for him and assisting in his care. The father should give financial support. As yet, relatively few children born out of wedlock receive any support from their fathers, and when support is received, the amount is usually inadequate."

This is largely a problem of youth and our immediate concern is to assist in the modification of conditions which tend to stimulate illegitimacy.

Provision for unmarried parents and their children should include:

1. "An agency with a staff equipped to give the mother sympathetic understanding and encouragement before the birth of her child, to give aid in making practical plans for proper prenatal and confinement care, and to assist in initiating and following through legal proceedings whereby she may establish paternity and gain support for her child from the father.

2. "Safeguarding the birth registration records so that the fact of illegitimacy will not become public or common knowledge.

3. "Good facilities for the placement of children born out of wedlock, and the elimination of such work by unscrupulous, commercialized maternity homes and uninformed persons."

The correction and prevention of neglect of children is a proper function of government. Most parents provide care for their children according to their knowledge, ability and means. The proportion of children who are abused or wilfully neglected is small but the aggregate number mounts into the thousands.

The grosser forms of physical cruelty are no longer prevalent, but agencies concerned with child and family welfare have discovered that there are many other forms of neglect and abuse—failure to provide sufficient food, suitable clothing, proper living conditions and needed medical and surgical treatment, and exposing children to immorality and immoral associates.

Deeper knowledge of personality and behavior problems, and discovery of the frequency of mental defects and mental disturbances among parents, and of the neglect or abuse of children, have led to more intelligent treatment. There has also come an appreciation of the importance of dealing with the underlying causes. The field of child protection now includes the correction of community conditions that lie back of much neglect and menace child life both at home and away from home, especially certain objectionable forms of commercialized recreation and contact with vice.

The care of dependent children away from home offers much opportunity for serious thought. From the very earliest colonial days, public authorities and sympathetic individuals have cared for dependent children. First in almshouses and by indenture to families, later in institutions or "orphanages," and through varied forms of foster family care, increasing numbers of children have been sheltered and protected.

Much has been accomplished in the past twenty years for this class of children. Much more needs to be done before each child can be assured of receiving the kind of care suited to his individual needs. The determination of what this is, must be based on the requirements of the child in terms of his individual family relationship, community relationship, his health, his capacities and the subtle, deep-seated needs of his own soul.

All standards of child care rest on two basic factors: (1) A trained and competent directing personnel; (2) The right methods of social work. All other considerations, such as plant equipment and endowment, are of secondary importance. Executives and staff members, must have special social case work knowledge and training requisite to this field. Child care should be based on intensive study and individual treatment—the essence of social case work.

Each community should make sure, with the aid of a thoroughly trained social worker, that all kinds of aid needed by families are given such

families, thus utilizing the valuable asset of existing family ties. In certain instances the families may prove to be unable to provide, even with aid, the kind of care which the children require. The next simplest step is to provide for these children in other family homes, which can readily be done by payment of board for them.

After these two lines of effort have been carried out for a few years, the actual child welfare needs of the community can be more accurately determined and more permanent plans developed.

There has been a transition in forms of care for such children. There is a decline in the number of children in institutions in relation to the general population of the country since 1910. This coincides with the development of public aid to children in their own homes. Almost as large a number of children are now receiving aid as are provided for by institutions. The decrease of institutional care may also be ascribed in part to the increasing use of boarding homes and other forms of care in family homes.

Institutions themselves have undergone fundamental changes. Many old-time, congregate institutions have been rebuilt into cottage groups and moved from crowded city streets to the suburbs. Large groups have been broken up into small groups, each having its own facilities. In many instances schools within the institutions have been discarded and the children sent to neighborhood schools, a first step in participation in other forms of community life. Development of foster family care as part of the work of institutions has proved sound, where executives and staff members have sufficient experience in foster family work.

Emphasis should be placed on investigation before acceptance for care and understanding of the possibilities of preserving the child's own home, and the necessity of meeting the child's needs. There must be a clearer recognition of the dangers of accepting as final the routine commitment of children by courts or public welfare officials, with little or no data as to personal and family histories of the children. The skill and consideration shown at the time of admission will have a determining influence throughout the rest of the child's life.

There is a close relationship between the size of an organization and the quality of its work. It can be too large. The tendency is, happily, for the child welfare agencies to limit their size and reduce the number of children for whom each worker is responsible.

A large proportion of children receiving foster care return to their own family within a few years. A small proportion have no families left as a background or have fragments of families so unsuitable that permanent care must be provided away from them. The whole plan for the child should be made with reference to these factors. If the child is to be returned to his family group, the relationship between him and his family must be strengthened. Contact must be fostered by proximity and rehabilitation of the family. For the child who has no parents or whose parents or close relatives are unable, unwilling or unfit to assume parental relations, it is important to determine this fact as early as possible and to find permanent foster care suited to his needs. Focus should be made on the child as he actually is, and on his capacity for growth and development and not on any preconceived idea of what one would think his heredity or environment might have made him. One must recognize the influence determining the child's life and decide whether the task of foster care is to be one of carrying on the good work begun by the parents or of modifying and correcting destructive influences. The processes of rebuilding and reëducation are slow, and more than the ordinary amount of time, understanding, knowledge and skill are needed to effect changes in children.

Child placement work is both an art and a science, involving every facility of community life, including health, religion and education.

DELINQUENCY

In the last twenty years we have come to realize that "the problem child" is really "the problem of the child."

On the basis of the best available statistics it is fair to say that in 1928 about 200,000 delinquent children were dealt with by the courts. In the area for which statistics were available, almost one per cent of the children of juvenile court age came before the courts as delinquents in that year. This figure takes no cognizance of an undoubtedly much larger group dealt with by the police without recourse to the court. These children who come to the attention of courts and police are the actually apprehended delinquents—those who have found it beyond their ability to meet even those elemental demands that have their origin in our living together as a group.

"Beyond the unmeasured sorrow that all this means, we might not be unduly disturbed were there not ample testimony on every hand that adult crime has its earlier manifestations. The outstanding challenge has been the offenders who long ago forewarned us, by the earlier influences and childhood reactions of this drifting and threatening mass of human misfits. Much of our present mode of handling these problems is but the

endless, monotonous task of sweeping up the debris of life."

Past attempts to solve this problem were based on rigid inculcation in the earliest years of habits of regularity, honesty, sincerity and courage, and a feeling that it was incumbent upon parents, guardians and spiritual advisers to provide wholesome mental pabulum for the child. It was expected that a child would develop respect for the treatment, accept the integrity of the existing social framework, and recognize the rights and privileges of others.

Recent attempts to solve the problem developed juvenile asylums and houses of refuge for children who otherwise would have been committed to jails and prisons. Court procedure was modified until the juvenile court movement of the past thirty years developed the aim of safeguarding, instead of punishing the child, of providing him with the care and training which a wise parent ought to give. Twenty years ago there developed an effort to find out what sort of a youngster the delinquent was.

Present day methods emphasize the scientific study of the child as a basis for understanding and dealing with his problems. There are still widespread, inadequate school procedures for dealing with truancy and behavior problems, unnecessary arrests, and detention in police stations and jails. Moreover, juvenile courts are still being presided over by judges not especially prepared for children's work, and the court work administered by an inadequate number of unqualified probation officers. There is an absence of psychiatric service, inadequate facilities for foster home or institutional care; absence of an effective parole system and lack of a well-rounded and coordinated community program for the development of constructive, wholesome interests, and the early study and guidance of children presenting problems of behavior and personality.

The Delinquency Committee accepted as basic two principles: First, reaffirmation that delinquency is a symptom of some earlier deeper maladjustment, and second, recognition that the delinquent child rather than the delinquency requires and merits study. Certain needs of the child are fundamental; first, the need of security and second, the need for development. Security comprises the need of every child to be wanted, loved and understood, accepted as belonging in his own individual place in the group.

"The child develops through his being recognized as a separate individual from the very beginning of life. Later this includes all those conditions giving him a satisfying status as an individual. There must be a feeling of adequacy, the minimum of consciousness of inferiority and opportunities for mental experiences and stimulation. The child must have avenues through which to obtain the satisfaction of self-expression, experimentation and achievement, which include active participation in experiences.

"The delinquent must be studied first in reference to himself, then to his physical and mental condition, because, the 'physical handicap' important as it is, is not as important as the child's attitude toward it.

"Intellectual handicap plays a lesser role than that earlier attributed to it. The greater proportion of delinquents are of normal mental capacity. In fact, some of our most serious delinquents are of distinctly superior ability.

"Aside from these constitutional conditions are the aspects of the child's emotional life as an important factor in his delinquency, a factor that demands the widest range of expert help in the handling. There is also an early fundamental source of conflict between the child and his family. The child's family is essentially conservative for it sums up the past, and the child is radical, for he builds for the future.

"There are also family needs of adjustment to the child. The family needs to grow like the individual. In practically all families the child arrives in a group that has more or less intense urges to express through the child—urges that are already determined by previous experiences. There is a strong desire within the family that the progress of the child be the expression of parental dreams and ambitions. The home may meet beautifully every material requirement and yet miserably fail to meet the child's elemental needs. Yet, the child's own family is of the utmost importance to him and is inextricably a part of his life."

We recognize certain forces as operating for reconstruction. The state has need for security and development. It must preserve law and order and public health—promote harmonious living and the conservation and expression of traditions that have ministered to racial and social progress. The state has erected a number of agencies for dealing with delinquency. Upon them the state depends for determining the nature of the conflict between children and organized society. Unfortunately even today the police are dealing with children substantially as they deal with adults, and the state institutions are being used as channels of punishment instead of a part of the treatment.

The school plays an important role in adjusting a child to life and for the most part little thought has been given to the nature of the child and to the guidance of his security and developmental

needs. More recently a new emphasis has developed in the school, a tendency toward realizing the devastating effects of failure and thus accepting a certain responsibility for later adult mental attitude. The child is individual, the school social. Between these there will always be stress, maladjustment and delinquency, yet these conflicts will disappear as the teacher less and less interests herself in what the child does and more and more in why he does it.

"The machine age has broken from tradition and there is a growing feeling that only that which is new has worth. This period of change engenders factors of stress that are of outstanding importance in the incidence of delinquency. In the prevention of delinquency no problem has more interest than the reintroduction of adequate emotional satisfaction into the actual earning life; the job in itself really must interest and challenge the child."

Women's increasing entry into industry and the tendency to continue working after marriage has developed a new form of family life, without permanency or common ownership. Apartment life, the restrictions of the family life, easy access to outside influences through the news, the movies, the automobile and the radio, constitute influences we have never had to meet before, and are beyond the control of the individual.

"We must use the neighborhood gang as a constructive force, remembering that most children like to play near home, most children prefer the hurly-burly excitement of the street and most children look askance at outside organization of their play. We must not lose sight of the child's need and inherent right to waste a part of his time.

"We have more and more provided for us what we earlier had to provide for ourselves. One stands aghast at the passivity of much modern recreation.

"Intangible and yet more real than any other community influence is the spirit of the child's neighborhood. In certain 'areas of delinquency' the non-delinquent is odd, different, insecure. Nor is this spirit of the community to be limited because the spirit of the nation—the spirit of our times—moulds the child.

"Two influences are outstanding: First, the new, the startling, that which excites. Certainly unhappiness and maladjustment have as one of their sources early emotional satiation in our ever more hurried giving to the child increasingly stimulating emotional experiences. The second influence is lawlessness. This lawlessness in its deepest and most devastating sense is the vicious belief that somehow more can be got out of life than one puts into it. A technic for the guidance of community influences and the neighborhood gang is of transcending importance."

The way out? It is submitted that three implications in the entire report transcend all others. They represent those goals which we are always to keep before us: (1) That we seek the widest expert knowledge and the deepest understanding of the child in relationship to himself, his weaknesses, strength and latent possibilities; (2) that we know his family and the members of his group; and (3) that we recognize that all authority has the duty to aid, not punish.

We must give the child security and supply his needs for development, because delinquency will not lessen until we understand the delinquent.

COMPLICATIONS OF PEPTIC ULCER*

James C. Hill, M.D., Newton

Ulcers of the stomach and duodenum are essentially similar. They appear in the acid producing stomach and in that first portion of the duodenum where the acid chyme enters before becoming changed by the process of intestinal digestion; hence they are called "peptic ulcers." Their complications concern us at this time. These depend to a greater or less degree on the stomach or duodenal site of the ulcer. They are: hemorrhage, perforation, subdiaphragmatic abscess, pyloric and duodenal obstruction and hour-glass contraction of the stomach. When the typical history of ulcer with its more or less classic syndrome becomes gradually changed to one of irregularity, with increasing difficulty in evacuation of the stomach and a hypersecretion high in grade and great in quantity, complications are present.

HEMORRHAGE FROM ACUTE OR CHRONIC GASTRIC OR DUODENAL ULCER

This is the most common complication. The source is usually a small blood vessel. Hematemesis or melena history occurs in 18 per cent of chronic gastric ulcers and in 25 per cent of chronic duodenal ulcers, as reported by Hurst of England. Crohn and Manheim report 29.5 per cent in gastric ulcer and 19.5 per cent in duodenal ulcer in a series of 180 patients. Moynihan and Balfour give 20 per cent for gastric and 25 per cent for duodenal ulcers. Duodenal ulcer causes bleeding more frequently than any other lesion in the stomach and duodenum.

Hemorrhage in ulcer occurs more frequently in women than in men. Crohn, in 426 cases, reports its occurrence in 45 per cent of 42 women and 24.5 per cent of 138 men with gastric ulcer; and in 39

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per cent of 23 women and 17.5 per cent of 223 men with duodenal ulcer. In Hurst's series it occurred four times as frequently in women as in men with gastric ulcer, but only one-half as frequently with duodenal ulcer. Hemorrhage is strong evidence that the ulcer is active. In duodenal ulcer it occurs from six to ten times as common as in gastric ulcer. Balfour reports hematemesis in 28 per cent, melena alone in 10 per cent and both in 62 per cent of bleeding gastric ulcers, while his corresponding figures for duodenal ulcer are 27.25 per cent and 48 per cent respectively. Hemorrhage rarely occurs when the patient is under a strict medical regimen. It is frequently preceded by an aggravation of pain for a day or more. Bleeding relieves the local congestion of ulcer and it is not uncommon for pain to disappear for days or weeks following its occurrence; in fact, a small ulcer may heal more rapidly following this complication.

Diagnosis of Hemorrhage from Ulcer. Vomited blood and stools should be examined for two or three days. The vomiting of blood is always followed by the appearance of blood in the stools. If occult blood or melena are not obvious, chemical and spectroscopic tests will show blood greater in amount than that found in meats or other foods. Vomited blood is acid and bright red; from the lungs it is bright red, frothy and alkaline. Thoracic disease can be diagnosed when hemoptysis has occurred.

Diagnosis of the Cause of Hematemesis. Acute or chronic gastric ulcer is the most frequent cause of hematemesis. The examining physician must be sure that the patient has not swallowed the blood, or that cancer of the stomach, cirrhosis of the liver, splenic anemia, hemorrhagic diathesis or diseases of the lungs do not furnish the cause. In splenic anemia and in hemorrhagic diathesis there is no history of digestive disturbances.

Crohn, of New York, by taking hourly blood pressure readings, has shown that the first symptom of hemorrhage in ulcer is a sudden fall of blood pressure. If the bleeding ceases, in three or four days the blood pressure will rise, due to absorption of water from the tissues which restores the volume in the blood vessels to a certain extent. The hemoglobin reading falls, due to the increased dilution of the plasma with watery elements. The severity of the hemorrhage, then, can be ascertained by blood pressure readings and hemoglobin estimation. The former shows the cessation or recurrence of bleeding and the latter the degree of anemia. In a single hemorrhage the hemoglobin may drop from 100 to 40 or lower; if below this, transfusion is necessary.

Prognosis of Hemorrhage from Duodenal or Gastric Ulcer. Hurst reports two deaths in 350 private patients. Conybeare reports 600 cases of hematemesis and melena, occurring from 1911 and 1920 inclusive. These were cases of profuse hemorrhage from acute or chronic ulcer. The mortality was 2.5 per cent. Crohn, of New York, in 101 cases of severe hemorrhage in 426 ulcer cases, reports surgery in seven cases with five deaths, and of the 94 remaining patients who were treated medically only four died, leaving a mortality of 4.2 per cent or .9 per cent of all the ulcers. Blumer, of Birmingham General Hospital, reports 526 ulcer cases between 1902 and 1926. Of this number, 12.7 per cent died from hemorrhage. Of 53 autopsies reported, 16 showed acute and 23 chronic ulcers. Balfour reported 1,072 operated duodenal ulcers in the Mayo Clinic in 1921 and 1922, with a history of gross hemorrhage in 184, or 18 per cent. Ninety per cent showed history of duodenal ulcer for nine or more years before the hemorrhage occurred.

Medical Treatment of Hemmorrhage from Stomach or Duodenum. The following is the method of Hurst in England:

1. Complete immobility of the stomach and duodenum, which keeps down the blood pressure and prevents clots from being separated from the bleeding area. No food or drink is given by mouth until there has been no bleeding for forty-eight hours.

2. Immobility of the patient is maintained by complete rest in bed and morphin. Atropin is given to inhibit the secretion of gastric juice.

3. Fifteen ounces of five per cent glucose are given by rectum, alternating with fifteen ounces of normal saline every four to six hours. If the patient seems dehydrated, normal saline should be injected subcutaneously.

4. In England it is common practice to wash out the stomach with about four ounces of ice water after hematemesis, repeated until the washings are fairly clear. Introduction of ferric chlorid, 1:1000 solution, also ice cold for its styptic action, is sometimes substituted for ice water irrigation. Withdrawal of this solution is followed by introduction of a dram of 1:1000 adrenalin chlorid. This solution, when given by mouth, is not absorbed and has no effect in raising the blood pressure.

5. A firm clot at the site of hemorrhage stops the bleeding. Alkalies should be given frequently to prevent the acid gastric juice from digesting the clot. A dram of tribasic magnesium phosphate every hour or two over a period of two days is considered good practice.

Hemostatic serum administration has been much practiced in recent years. At present, we believe that these serums, whether introduced subcutane-

ously or intravenously, have no effect on blood coagulability.

The patient's blood should be grouped and a suitable donor found in case transfusion might become necessary. Blood pressure readings and hemoglobin estimations should be done daily after hemorrhage to determine if the patient is bleeding. If the hemoglobin percentage falls to 40, about 500 c.c. of blood should be transfused at once.

Treatment of Acute Hemorrhage from Peptic Ulcer, as Outlined by Sippy. The patient should have rest in bed, with morphin and atropin as frequently as necessary to control restlessness. A light ice coil should be applied to the epigastrium. No salines are given by bowel or subcutaneously, and no styptics.

Free hydrochloric acid in the stomach should be controlled by calcined magnesia, 60 grains, and calcium carbonate, 30 grains, in one or two ounces of water, repeated in one-half hour. At the end of one hour calcined magnesia, 30 grains, and calcium carbonate 30 grains, should be given and from this time calcium carbonate, 30 grains, administered every half hour for ten or twelve hours. Thereafter, every hour, 60 grains of calcium carbonate should be given for the next eight or ten hours. On the next day 20 grains of calcium carbonate should be given every half hour, and during the following night 60 grains every hour are usually adequate to control the free hydrochloric acid.

Blood pressure readings are not taken.

Usually on the third day following acute hemorrhage, routine ulcer management is instituted, with the exception that 10 grains of calcium carbonate are added to both powders Nos. 1 and 2. The thing of importance is neutralization of the free acid.

No stomach tube is used for at least ten days or two weeks. In Sippy's experience, acute hemorrhage did not recur after this treatment had been in progress for twenty-four hours.

Surgical Treatment of Hemorrhage from Stomach or Duodenum. Deaths from hemorrhage occur in about 2 per cent of Guy's Hospital reports in London. Operation for hemorrhage shows unfavorable results. American and British surgeons are unanimous in this view (as reported by Hurst in 1929), Balfour states that "the danger of succumbing to hemorrhage is less than the danger of operation during hemorrhage." It seems that the only indication for operation is in case of continued bleeding that does not cease regardless of fasting and medical measures, or in case of a once reported massage gastric hemorrhage where the patient is transfused and operation performed as an emergency procedure. This view is concurred in by Walton, Moynihan and W. J. Mayo. Hurst believes that the only indication for operation in the acute stage of hemorrhage is persistent and continued bleeding from chronic ulcer in a patient whose vessels are sclerosed and will not contract sufficiently to allow clots to form. He reports that only three times has he found it necessary to have operation performed on patients on account of hemorrhage from gastric or duodenal ulcer.

Should patients having hemorrhage be operated upon at a later date for this complication? Balfour reports hemorrhage after operation in 13 per cent of ulcer cases (83 duodenal and 17 gastric) with a history of previous hemorrhage but in only .9 per cent of cases with no preceding hemorrhage. Hohlbaum reported in 1922 that 20 per cent of gastro-enterostomized patients for duodenal ulcer had either severe or fatal bleeding. Most of these patients had bled before so that he reports that operation for hemorrhage is no longer performed in Leipzig. The new Lodge Clinic reports that out of 26 cases of hematemesis or melena, 42 per cent occurred after operation and four of these patients had not previously bled. This report indicates that the possibility of hemorrhage is just as great after operation has been performed for gastric or duodenal ulcer as after the usual medical treatment, whether the patient has already had a hemorrhage or not.

Crohn, in Mt. Sinai Hospital, reports that in not one case of fatal hemorrhage from ulcer had previous hemorrhage occurred. Nielson, in Faber's Clinic in Copenhagen, reports 182 cases diagnosed as ulcer. Operation was performed on 42 of these between one and twenty-one years later, but never for hemorrhage. The remaining cases were traced from two and one-half to nineteen years. Of these, 16 have died but only two from hemorrhage, or less than one per cent of the whole series. Conybeare, in reporting Guy's Hospital figures between 1911 and 1920, gives similar statistics.

Hemorrhage from a duodenal ulcer is indication for surgery. (Balfour, in the Mayo Clinic collected papers, 1927.) He believes that the consequence of repeated hemorrhages without operation is greater than the danger from the operation. Ulcers of the duodenum are usually chronic and surgery offers more permanent relief than any other form of treatment. Balfour believes that operation at the time of the bleeding is indicated also in gastric ulcers if the patient's condition can be improved sufficiently.

PERFORATION

This is the most common cause of death from ulcer. Statistics from the Leeds General Infirmary show that out of 500 cases of chronic ulcer

death due to perforation occurred in 68 cases. In 200 cases of death due to duodenal ulcer, 170, or 85 per cent, followed acute perforation and 5 or, 2½ per cent, followed subacute perforation. Perforation occurs most commonly between the ages of 25 and 45 years. Hauser's statistics show that this complication occurs in the ratio of one in men to 1.8 in women in cases of gastric ulcer and 2.7 in men to one in women in duodenal ulcer. In the Leeds autopsy series, 159 males had perforations at an average age of 45 years, and 15 females at an average of 42 years. By far the vast majority of acute perforations occur on the anterior surface of the stomach and duodenal bulb. In the Leeds autopsy series, 86.8 per cent of the gastric ulcers that perforated were anterior. Moynihan reported 7.5 anterior to one posterior in 1907, and Paterson 6.5 to one in the same year. Duodenal perforations are in the vast majority of cases anterior, about six anterior to one posterior. "At Leeds in 180 chronic open ulcers of duodenum 104 were anterior, of which 73, or 70 per cent, were perforated, and 76 posterior, of which 10, or 13 per cent, were perforated."

In acute perforation the stomach contents escape into the free peritoneal cavity in about 95 per cent of the cases (Sippy). In 5 per cent the escape is so slow that a limitation abscess forms locally (Sippy). Paterson reports perforation in about 7 per cent of all cases of peptic ulcer. Ninety per cent of acute perforations of the stomach and duodenum occur on the anterior wall (Sippy). It is the most serious of ulcer complications. Chronic perforation is usually limited to posterior walls and is of the slow, dissecting type.

Normally the contents of the stomach and duodenum are free from pathogenic organisms. In a few hours, usually about twelve to fifteen hours after perforation, bacterial infection of the peritoneum begins in the vicinity of the perforated area. At the time of perforation no infection is present but a virulent septic peritonitis develops after twelve to fifteen hours' time. In 69 per cent of 34 cases of perforations reported by Deaver and Pfeiffer in 1921, the peritoneal exudate was sterile during the twelve-hour period following the perforation. In a certain number of cases peritonitis remains local in both ruptured duodenal and gastric ulcers. A "walled off" abscess occurs which may be drained and recovery will follow. The pus may not remain local but may invade the subphrenic region or gravitate toward the pelvis. A number of abscessed areas may develop between coils of the intestine. Anything which causes distention of the stomach or duodenum where ulcer is present threatens to rupture the ulcer. Perforation occurs for the most part in chronic ulcers, although the symptoms of the ulcer may have been present for only a few weeks or months. It takes place usually one or two hours after meals. It rarely happens if the patient is under careful dietetic management. It may occur while straining at stool or while doing violent exercise. The pain and shock at time of perforation may be so severe as to cause immediate death. The patient is completely prostrated, the expression is anxious, profuse sweating occurs, the pulse is rapid, small and weak, the temperature subnormal and the body cold. Rigidity of the abdomen becomes marked, and respiration rapid, shallow and thoracic in type. Vomiting may occur; it is common in gastric perforation and occurs in approximately 25 per cent of duodenal perforations. In an hour or two following the occurrence of perforation a reaction may take place in which the patient, although in much pain, seems to rally and there is an improvement in his general condition. Inside of this hour or two liver dullness may become reduced and gas, escaped in the general peritoneal cavity, takes its place. Later gaseous bowel distention appears as a part of the process of peritonitis. A valuable sign is the disappearance or diminution of liver dullness, pointing to a perforated gastric or duodenal ulcer. General peritonitis may develop later. If early surgery is not practiced in these cases death will often ensue in three to five days. The situation is one of imperative early operation; it should be differentiated, however, from rupture of gall-bladder, ruptured ectopic gestation, intestinal obstruction, acute pancreatitis and acute appendicitis, all of which are urgently and immediately surgical. Biliary colic, gastric crisis of tabes, referred abdominal pain in the onset of pneumonia, mesenteric thrombosis and embolism must be considered in the emergency.

Treatment. The first successful operation performed for perforated gastric ulcer was by Heusner in 1892. In 1895 Dunn, in Guy's Hospital, sutured the first perforated duodenal ulcer. Morphin ¼ grain and atropin 1/150 grain were given immediately after diagnosis. Statistics on surgical treatment of perforated gastric or duodenal ulcer by Turner, Hodgson and Lohr are as follows: 105 cases operated inside of 6 hours: recoveries 100, deaths 5; 131 cases operated from 6 to 12 hours: recoveries 113, deaths 18; 143 cases operated after 12 hours: recoveries 78, deaths 65.

The operation of choice is suturing of the ulcer. Gastrojejunostomy may be done as a subsequent operation if necessary. If the perforation is in an ulcer at or near the pylorus, if the patient is in a satisfactory condition and if it seems that obstruc-

tion might develop later, the gastro-enterostomy may be done at the same time the ulcer is sutured.

SUBDIAPHRAGMATIC ABSCESS

Barnard analyzed 76 cases of subdiaphragmatic abscess in 1910. Twenty-six of these were due to perforated peptic ulcer. Leckwood, in reporting the Mayo Clinic series, found that in 113 cases of subdiaphragmatic abscess, six followed perforation of gastric ulcer, six of duodenal, six followed gastrojejunostomy and one followed excision of gastric or duodenal ulcer. Leeds Infirmary autopsy records between 1910 and 1925 show that twice as many abscesses of this type followed rupture of duodenal ulcer as of gastric ulcer. Hurst and Stewart claim that most of the cases seen today are the result of surgical treatment of perforation with inadequate drainage. Sippy reported subdiaphragmatic abscess as most commonly caused by ulcer. Subdiaphragmatic abscess is surgical, drainage being the only treatment unless the abscess should accidentally rupture into the stomach and pus be vomited or aspirated with a tube.

PYLORIC AND DUODENAL OBSTRUCTION

I. The stomach should be empty six to seven hours after a full meal. Emesis of food eaten the day before, the succussion sign elicited by agitating the stomach before breakfast, visible peristaltic waves from left to right over the gastric area and presence of sarcinic yeast organisms in the vomitus or aspirated material before breakfast indicate pyloric obstruction of high grade.

II. Hypersecretion or continued secretion:— When this complication exists there may be from 100 c.c. to 1,000 c.c. or more of gastric juice in the fasting stomach or in a stomach from which the food has passed out. It occurs in many conditions but is by far the most pronounced in pyloric ulcer with obstruction. Even if a high degree of organic obstruction is not present this excessive quantity of highly acid secretion causes gastric pain, due to the acid irritating the "raw spot," and a reflex pylorospasm causes still further retention.

Obstruction is of two types, organic and functional. The organic causes are neoplasms, inflammatory lesions of the stomach and ulcer with cicatrization in the duodenum or at the pylorus. Cicatricial stenosis is usually due to duodenal ulcer.

Pylorospasm or spasm of the pyloric sphincter is functional obstruction. It may be caused not only by peptic ulcer at or near the pylorus but by ulcer remote from the pyloric region, by cholecystitis and chronic appendicitis. As the majority of gastric ulcers are an inch or more from the pyloric canal and duodenal ulcers are within an inch of the pylorus, inflammatory obstruction is more commonly due to duodenal ulcer. Proper medical management of ulcer causing this type of obstruction may lead to disappearance of the obstruction by the loss of edema and infiltration in the process of healing. Pylorospasm causing obstruction is purely functional and is curable. Inflammatory obstruction with edema and congestion frequently is curable. Cicatricial stenosis is organic obstruction and is curable only by surgery. No symptoms of obstruction appear if the pylorus and duodenum are sufficiently patent to let chyme pass through. As pyloric or duodenal narrowing increases, hypertrophy of the stomach walls increases. Acid eructations and "peristaltic unrest" come on immediately after meals. Vomiting may occur, the amount of vomitus increasing as the obstruction increases. Visible peristaltic waves appear over the gastric area.

Treatment of Partial Obstruction Due to Peptic Ulcer. The medical treatment of partial obstruction is the same as that in the case where no complication exists, except that the stomach should be evacuated and possibly irrigated every night at 9:30. Hurst advises continuation of this nightly treatment for two weeks. If the quantity aspirated gradually diminishes, the procedure should be continued until 100 c.c. or less is obtained, then the usual medical and dietetic regimen for peptic ulcer instituted. Atropin is given if there is continuous hypersecretion.

Kussmaul, in 1869, first reported tetany as a result of pyloric obstruction. Uremic symptoms may also appear due to the same condition. Gastric tetany as known now, is no more than an interesting and dramatic evidence of severe intoxication produced by obstruction in the upper part of the intestinal tract. The treatment for this condition is surgical after a preliminary course of glucose and normal saline, either by rectum or intravenously. Haldane discovered that ammonium chlorid will produce acidosis when given orally. Miller, in England, reports that two ounces of a two per cent ammonium chlorid solution has become effective in combating alkalosis in a few conditions. W. R. Johnson has more recently advocated the following treatment for tetany: (1) The dehydration is treated by intravenous administration of 2,000 c.c. or more of normal sodium chlorid each day and 2,000 c.c. of liquid food by mouth and by rectum. (2) Under this treatment and repeated gastric lavage, in a few days a very toxic patient will be in good condition. (3) Surgical removal of the obstructing lesion.

Pyloric obstruction due to all types of ulcer and all degrees of severity may fall into two groups as regards medical or non-medical treatment:

1. Obstruction of the pylorus that is relieved in the first three weeks and completely disappears in that time under medical management for ulcer. Sippy claims that from 80 to 90 per cent fall into this group. It includes acute inflammations with edema and pylorospasm. The management includes hourly feedings of milk and cream with three small meals daily in addition and alkali between feedings. If hypersecretion exists, nightly aspiration is done after the last powder. In less than three weeks' management the stomach is found empty in six or seven hours after a motor meal.

2. Obstruction of the pylorus that does not disappear completely by the end of the three weeks' medical management. Fifteen per cent of obstructions due to ulcer fall into this group. Cicatricial stenosis or narrowing is the usual cause. Gastroenterostomy is indicated. In this class of obstruction the presence of carcinoma must be ruled out if possible.

A survey of 1,224 cases of ulcer between 1912 and 1927 treated at the Presbyterian Hospital in Chicago was recently reported by Ralph C. Brown. Of these, 1,130 cases were treated medically and 94 were referred to surgery. He reported 49.5 per cent as cured, 16.7 per cent satisfactorily improved, and 10 per cent moderately improved. In 20 per cent of the cases medical measures failed. He concluded that 20 per cent of the patients with ulcer (gastric or duodenal) who enter hospitals are surgical.

Cure by medical measures alone, after a five-year period of observation, is reported in 27 per cent of the cases by Nielson, Crohn, Greenough and Joslin. Eusterman, in a discussion last year, reported a series of 520 duodenal ulcer individuals, examined between 1915 and 1926, in which 35 per cent were cured, 43 per cent improved. Others had died, while some had had perforation, hemorrhage and so on. He concludes that undoubtedly, the welfare of the patient with active, long standing or complicated gastro-duodenal ulcer is best conserved by competent surgical intervention."

HOUR-GLASS CONTRACTION OF STOMACH

The Mayo Clinic reports this condition present in six per cent of their operations for chronic gastric ulcerations or scars. Moynihan in 1907 reported it in 7.8 per cent of gastric ulcers operated upon by him. The condition follows saddle-shaped ulcers of lesser curvature, involving the middle third of the stomach. It may be due to carcinoma or syphilis. In one-fourth of the cases it is accompanied by pyloric narrowing. About 75 or 80 per cent are found in women. In a series of 335 cases, 90 per cent were women. The clinical history is one of chronic gastric ulceration with gradual oncoming symptoms of obstruction. In one large clinic the average history of symptoms was 11 years. The presence of hour-glass stomach is found by barium meals and x-ray. It may be functional or organic. If functional, it is commonly caused by reflex contraction of the stomach due to tiny ulcers on the lesser curvature or to irritation outside of the stomach.

Fistulae resulting from peptic ulceration are exceedingly rare. In over 500 autopsies for chronic peptic ulcer they occurred but five times.

Uncomplicated peptic ulcer may run a course of exacerbations and remissions for as long as thirty or more years. The patient may be symptomless for weeks and months but more or less periodically or continually experiences hunger pains, or gnawing and grinding sensations in his stomach, which are relieved by food and alkalies. He may continue for years with losses and gains in weight, but should any of the incapacitating and serious complications arise the whole situation immediately changes. The ulcer is dangerous to life and health, largely because of its complications. Perforation takes the largest toll of lives. The more frequent complication of hemorrhage is not so fatal. The organic cicatricial deformities of the stomach and duodenum, the partial or complete pyloric stenoses, the hour-glass stomachs and occasionally malignancy, by the skillful aid of modern surgery, have been most materially reduced. Let us remember that each complication has its mortality rate. We should study each ulcer case with painstaking care and ever be on our guard in case a complication arises to determine whether medical treatment or surgical intervention is the correct procedure.

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Discussion

Dr. Walter K. Long, Hampton. Mr. President. I think that this subject is a very important one. In reading over some of the literature, I find that Hurst

of England has warned us against the term "peptic ulcer," including the duodenal and the gastric ulcer.

We are apt to get into bad habits, as in the days of rheumatism and catarrah. Though very often the diagnosis depends upon the short distance from the pyloric ring, above or below, nevertheless in many cases an exact differentiation between gastric or duodenal can be made.

In speaking of gastric and duodenal ulcers, these two forms occur in opposite types of individuals. There are similar and dissimilar factors at work in their production. The chemical contents in either condition are very different. Symptomatically they can very often be differentiated. Hemorrhage and perforation act differently in each.

I would add to the complication of gastric ulcer, gastric cancer, which undoubtedly in a certain number of cases is engrafted upon gastric ulcer. Duodenal cancer, on the other hand, is rare, and there are many pathologists who have never seen it.

Hemorrhage often occurs in acute gastric and duodenal ulcers; they rarely perforate. Acute ulcers are usually multiple and may heal and leave no trace of their presence but they may also become chronic. Hemorrhage and ulceration, of themselves acute, are evidences of chronic ulceration which is excited to activity. It is the chronic ulcer that perforates.

An important point in the treatment is that we do not keep these patients under constant observation. As soon as they are relieved of the symptoms, they stay away. We give them the correct diets but perhaps do not hear of them again. Our modern treatment of gastric and duodenal ulceration has not been changed and there is great room for improvement in this way.

Among other things, in treating these patients it is necessary to do away with all sorts of focal infection, from teeth, tonsils and so on. In the past year or two we have seen an increasing number of patients with rather vague gastric symptoms, heart-burn, distention and so on. The symptoms often clear up under diet and treatment, but I think where they recur or have a tendency to recur, the exploratory incision is strongly to be considered. I believe this latter measure would help a great deal toward reducing the incidence of gastric cancer in later life.

Dr. G. Raymond Johnson, Ottumwa: I am very glad to have had the opportunity of reading and hearing Dr. Hill's paper on peptic ulcer with complications.

Hemorrhage is the most common complication. It is a subject upon which I may speak from experience (having had two hemorrhages), if you will pardon the reference. I was asked to make my discussion more or less of a case report. Dr. Hill brings out in his paper the fact that hemorrhage rarely occurs if a patient has been under proper management. In my case I believe that would have been true, and in other cases that I have observed I believe it is also true.

My first hemorrhage occurred about ten years ago. I had been having trouble for two or three years. I had seen several doctors who had passed the trouble over as indigestion and put me upon very temporary management. I believe in the same way today we hurriedly pass over cases and do not give them the study that we should. Probably hemorrhages occur that could be prevented. All cases are not easily diagnosed; all are not typically textbook cases.

When the second hemorrhage occurred, my case was more or less similar to that of a patient under strict management, who has been warned of the complications that may occur later. That patient has been told that he should return to management immediately if his symptoms should reappear. My second hemorrhage occurred only last December. I had been having trouble for two or three months. I paid no attention to it except that when the pain or the distress became too uncomfortable, I would take a dose of soda or a glass of milk. I was a poor, non-cooperative patient and a poor, neglectful doctor. At that time, though, I knew what was taking place and was quiet.

Absolute rest is essential in the treatment. If necessary morphin and atropin, or opium per rectum every three to four hours may be given as indicated to obtain rest, and then nothing else per rectum for forty-eight hours, and nothing by mouth, say, for four days.

Regarding transfusion and surgery, I believe that we can well afford to be a bit slow. When the case becomes ambulatory, place the patient upon management, modified to meet conditions, instructing him as to possible complications and warning him that if symptoms should recur, he should return immediately upon management. An ulcer patient may be trained to take care of himself, in much the same way as a diabetic patient may be trained.

I agree with Dr. Hill as regards surgery in hemorrhage cases. From cases I have observed, surgery cannot be said to be a prophylactic measure. As far as my own case is concerned, I prefer to remain on medical management.

As for perforation, immediate surgery is indicated, but after a case has gone for, say, twenty-four hours, then good surgical judgment should be exercised. In acute obstruction I have seen wonderful results from medical management. I have in mind one case in which the stomach was so enlarged that the usual amount of barium given for fluoroscopy merely outlined the greater curvature down in the pelvic area. We cannot be definite as regards surgery, because we may have a recurrence of obstruction in many cases, with possible formation of cicatricial tissue so that operation may be indicated later.

I wish to reiterate the plea that Dr. Hill made for individual consideration of each case. We should study the individual case more carefully and watch it over a long period of medical management, using surgery only as a last resort. Subject the patient to a physical examination, consider possible foci of infection, consider the condition of the appendix and the gall-bladder, consider the habits and general hygiene of the patient, and all the factors concerned in such a subject which there is not time to discuss here.

Dr. M. Bannister, Ottumwa: In regard to the management that Dr. Hill brought out, I should like to call your attention to the fact that if you use calcium carbonate you are apt to get impaction in the rectum. If you use calcium carbonate commence early to use oil enemata and you will not get impaction.

I never have understood just exactly why Dr. Sippy did not want us to take blood pressure in hemorrhages. Certainly it does not do any harm. I think it is quite a valuable adjunct and it is advisable to know how much blood the patient has lost and what he needs.

If Dr. Hill has found any reason in the literature why we should not take the blood pressure, I would be glad to know it.

If the patient has lost a great deal of blood, give a transfusion. I am satisfied that I once lost a patient because I did not transfuse.

Dr. Donald Macrae, Jr., Council Bluffs: There are just two or three points I wish to make. I think most of you who have had experience over the past few years have been up against this pro and con discussion between the surgeon and the medical man as to which is the proper form of treatment. A few years ago the surgeons were very radically in favor of surgery, as you know, gastro-enterostomy and so forth. So many of the surgeons have developed gastric ulcers themselves that they have become more conservative. Lahey of Boston and Moynihan of England have developed gastric ulcers, and now they have joined the left wing.

We must consider the geographical location of the individual; not where the ulcer is on the stomach but where the man lives. In my community where men have lost their money in the stock market, or because of fall in land values, they cannot spend several months eating bird seed and attend to business. Therefore we have to take into consideration the question of the geographical location and perhaps operate a little more often in this part of the country than they do elsewhere, where the patient with an ulcer can spend a lot of time at the seashore with a nurse or go to Europe or take a Meriterranean trip. Many of these patients, I think, might get well by waiting several months, with stomach tubes, soda, impaction of the rectum and so forth. We must operate on them in Iowa in order to get them well and to work more quickly.

In my experience, and I think in the experience of many here, ruptured ulcers appear in people who have not been treated for ulcers. The patients have not had much difficulty. Not until after they have been operated on do you get a history that they have had distress after eating, have taken soda, and so forth. I should say that ninety-five per cent of the patients with perforated ulcers whom I have seen have never been treated, and have never consulted a doctor for their condition.

As Dr. Hill brings out, the mortality increases as the time elapses after perforation. The picture is so beautiful, so definite, so positive, it seems to me that in the large majority of these cases there should be no time wasted.

I listened to the discussion on the fee bill in the House of Delegates. I will just give you an illustration of why we should not have a fee bill. A man makes a call on a patient with perforated gastric ulcer. He gives a hypodermic of morphin. He goes back in the evening and gives another hypodermic. The next morning he gives another hypodermic, and makes $9.75. Then he calls in the surgeon and the patient dies. You cannot compute in dollars and cents what the one call is worth. It is a matter of delivering the goods and charging for service rendered. Graham says that after twenty-four hours they all die. I do not believe that because I have seen some of them get well. As a matter of fact the further away you get from the time of perforation, the higher the mortality.

The minute a diagnosis or suspicion of perforated ulcer enters the mind of the doctor, *that moment* the patient should be transferred to the man who is to do the surgery. I think practically all of these patients get well if you can operate the first six or eight hours, most of them without complications.

A long time ago I used to follow Deaver in doing a gastro-enterostomy but in later years I have just been closing the ulcer, and I find I get along just about as well, although I think half the results are not so good, but you do not subject the patient to the extra risk.

I have had several cases, no doubt you have had, in which I closed some of the large, indurated hard mass around the ulcer. There is danger of shutting off the lumen of the duodenum. In these cases I make just a little hole in the stomach, a half inch hole and pass my finger through the duodenum. You can sew up the hole and it does not add one bit to the operation.

I wish to bring out the fact that all doctors who see cases of perforated ulcer should operate immediately themselves or get the patient to the man who is going to operate, because delay means a funeral.

Another point I want to bring out is chronic appendicitis. We showed four cases the other day in the hospital at the clinic, in which the appendix had been removed from two to four months before we operated for ulcer perforations. They were all cases of so-called chronic appendicitis, if there is such an animal. No man can make a diagnosis of chronic appendicitis with any assurance that his diagnosis is correct. These patients had been operated upon for chronic appendicitis without exploration. Whenever you remove an appendix that is not acute, make an exploration of the entire abdominal cavity. You may find ulcer of the stomach, or you may find carcinoma of the sigmoid. These four patients had all been operated upon for chronic appendicitis just a few months before. No doubt these ulcers were present at that time. Had the doctor found them, if he had done nothing else but put a piece of omentum over the induration, he might at least have prevented a perforation.

Dr. James C. Hill (closing): Mr. President, one feature that was not brought out in the discussion which I wish somebody would tackle is the question as to what you are going to do with the acute ulcer patient who has hemorrhage. For example, here is a man whose ulcer may have extended over a period of a few days, a few weeks, or at least a few months. He has a hemorrhage, and he dies in an hour or two or in five or six hours. The question arises, what is the best method with which to handle this kind of case? Of course, in this case I believe calcium carbonate would be insufficient to stop his hemorrhage.

Dr. Long brought up the question of malignancy as a complication. I merely mentioned that in my paper and did not have time to discuss it. Of the malignancies of the stomach that cause trouble, so far as obstruction is concerned, about sixty or seventy per cent are in the vicinity of the pylorus. I believe that was brought out this afternoon by Dr. Howard.

In the case of partial obstruction, it is always wise to try the medical management together with the use of atropin and alkalis to bring the secretion down. Sometimes you will be surprised to find that by giving atropin the pylorus will open up and become sufficiently patent to allow food to go through for a long period of time.

Dr. Bannister brought up the question of blood pressure. The only reason I know that Sippy recommended not taking the blood pressure is because of the patient's anxiety, and putting a wide band on the arm does, in our opinion, raise the blood pressure somewhat, which, of course, would have a tendency to further increase the bleeding.

The drug that is used in hemorrhage in addition to powders Nos. 1 and 2 of the Sippy management, is calcium carbonate and not calcium chlorid.

The question was brought up as regards calcium carbonate causing rectal impaction. Some times it does cause rectal impaction. I was talking to a prominent gastro-enterologist, and he said he merely had to dig the calcium carbonate out of the rectum. When it does cause rectal impaction, it can, of course, be removed.

The question of bleeding following operation is something that I do not believe anyone mentioned. Balfour makes a report of hemorrhage after operation in thirteen per cent of ulcer cases with a history of previous hemorrhage, but in only .9 per cent of the cases where there was no preceding hemorrhage.

I wish to thank those who took part in the discussion and the remainder of you who listened to our paper this afternoon.

A STUDY OF THE INCIDENCE AND SYMPTOMS OF ECTOPIC PREGNANCY*

M. C. Hennessy, M.D., Council Bluffs

The subject matter of my discussion is a study of the incidence and symptoms of ectopic pregnancy as based on an analysis of case records of patients admitted to Mercy Hospital covering a period of ten years from January 1, 1921, to December 31, 1930. My reason for making this analysis and presenting it to you is that I believe it is not as rare a condition as was formerly thought and also to prove that it has a very definite symptom complex upon which to base a diagnosis.

However, before presenting my analysis of the case reports I will briefly review some of the accepted material in the literature on the subject of ectopic pregnancy.

Ectopic pregnancy includes all cases in which the fertilized ovum is implanted in any location other than the normal site. This discussion covers only tubal pregnancy and not abdominal or ligamentous pregnancy. Prior to 1880, when Lawson Tait first operated upon a ruptured tubal pregnancy, very little was known other than from a pathologic standpoint. Since that time, the subject has received more attention and interest, and considerable material can be gathered from the literature of recent years. It has been shown that it occurs with more frequency than was formerly supposed to be the case, but even today we have little knowledge of the reasons for its occurrence. In reviewing the literature on this phase I chose the etiologic classification as outlined by Williams as the most plausible. Briefly, it is as follows:

1. Conditions which interfere mechanically with the downward passage of the ovum, such as peritoneal adhesions compressing the lumen of the tube, the presence of polypi in the lumen of tube, tumor masses pressing on the tube, destruction of tubal cilia as the result of endosalpingitis, persistence and pressure of fetal convolution, diverticula, accessory tubal openings and atrophy of tube interfering with peristaltic action.

2. Conditions resulting from inflammatory condition of the tubes, ovaries and pelvic peritoneum. Under this heading Dr. Williams lists gonorrheal salpingitis and inflammation of the appendages and bases the classification upon the reports of numerous men who showed these conditions to have existed in two-thirds of their cases.

3. Physical and developmental conditions which favor decidual formation in the tubes. This heading is based upon Webster's work on the decidual reaction. Webster's contention is that the proper implantation of ovum cannot take place unless the decidual reaction occurs and that when a tube becomes pregnant the reaction must be present and he considers it a stigma of degeneration or reversion to type. This theory has been proved to some extent in experimental work upon

*Presented before the Eightieth Annual Session, Iowa State Medical Society, Des Moines, May 13, 14, 15, 1931.

rabbits, by placing ligatures at different points of the generative tract, at certain periods of time following copulation, in order to produce obstruction. When ligatures were placed at the uterine ends of tubes, extra-uterine pregnancy did not occur, but when ligated at the middle of the cornua of the uterus it did occur.

This outline of Williams' undoubtedly explains reasons for a great number of cases, but when compared with the reports of others it still leaves a percentage unexplained because ectopic pregnancy has occurred when no other pathology was present.

TYPES OF ECTOPIC PREGNANCY

The ovum can be implanted anywhere between the follicle and the uterus, giving rise to the two primary types—tubal and ovarian. Most authors agree that other types, such as broad ligament and abdominal pregnancies, are the result of abortion of the tubal and ovarian pregnancies because they feel that it is doubtful if the ovum could be implanted upon the peritoneum or the ligament.

Frequency of Types. Tubal pregnancy is by far the most common type and it may be unilateral, bilateral, single or multiple unilateral and bilateral, or both. Launay reports a case of multiple tubal pregnancy consisting of twins in one side and a single pregnancy in the opposite tube.

Next in order of frequency is the so-called ovarian pregnancy and there is some question as to whether or not this is primary, or the result of extension from the tube. Some careful investigators have found but few authenticated cases in the various reports. Ray, in Surgery, Gynecology and Obstetrics in 1921, reported that twenty cases had been proved ovarian pregnancy.

Broad ligament and abdominal pregnancies are now generally accepted as secondary types, the result of rupture or incomplete abortion or an extension of tubal pregnancy into the ligament or peritoneal cavity.

TERMINATION

Ectopic pregnancy may terminate in one of the several ways. Abortion, either complete or incomplete; rupture; absorption, disintegration or calcification of the ovum; removal by surgical intervention; or full time development. Abortion, most authors agree, is the most common termination and occurs in about seventy-five per cent of the cases, complete abortion being less frequent than incomplete. Rupture occurs next in order of frequency. The termination of tubal pregnancies depends upon the location of the implantation in the tube. Thus, if the ovum is implanted in the isthmus, the size of the passage does not permit much distension, and early rupture is the rule. In the ampulla, abortion is the rule. By complete abortion is meant the expulsion of the ovum, membrane and contents into the peritoneal cavity. The resulting hemorrhage is slight. In the incomplete type there is only a partial loosening of the ovum from the tubal wall and the hemorrhage may be severe or moderate, depending upon the location of the vessels. Rupture occurs generally at the site of the placenta and is thought to be due to burrowing of the chorionic villi and distension. It enters either the peritoneal cavity or the folds of the broad ligament and generally occurs about the eighth week. As stated before, if the ovum is not removed by surgery or is not absorbed or degenerating in one form or another, after rupture or incomplete abortion, and there is still enough placental tissue intact with its attachment to receive sufficient maternal blood supply, it may develop further and even reach full term. Stellner found only 179 cases of full term development on record.

The percentages of incidence of ectopic pregnancy in the literature cover a wide range and I was unable to find any definite percentage of occurrence. The Cook County Hospital reports the occurrence of 183 cases during a seven year period from 1912 to 1919. Masson, in a report from the Mayo Clinic, states that there were 486 cases admitted from January 1, 1903, to December 31, 1928. Other statistics vary from once in every 150 normal pregnancies to once in 300 or over normal pregnancies. Mercy Hospital admitted 58 cases during ten years' time as against 2,312 normal site pregnancies during that period, a ratio of one ectopic to 39.8 normal pregnancies.

Ectopic pregnancy may occur under any of the following conditions: in women who have borne no children; sandwiched in between two normal pregnancies; in women who have had repeated pregnancies; in women who have been exposed to possible pregnancies over a period of years, and followed by a normal pregnancy; or on the opposite side after a previous ectopic pregnancy. A report from the Mayo Clinic giving the results in 198 cases of extra-uterine pregnancy and subsequent pregnancies, showed that eighty-seven (44 per cent) of the 198 patients became pregnant after having had an extra-uterine pregnancy. In all, the number of pregnancies subsequent to extra-uterine pregnancy was 162, and in 111 of these the pregnancies were normal. In thirty-four cases (20 per cent of the 162) the pregnancies were intra-uterine but terminated in miscarriages. Eighteen (less than 12 per cent of the 162 pregnancies) were extra-uterine.

Diagnosis

Ectopic pregnancy is seldom diagnosed before rupture because the physician is not consulted until the accident happens. However, if the patient gives a history of early subjective and objective symptoms of pregnancy and a mass is found in either tubo-ovarian region, it will be safe to assume that it is an ectopic pregnancy. After rupture the diagnosis is fairly easy and can be made without much hesitancy. In proof of this point I wish to introduce my analysis of the cases occurring in Mercy Hospital.

Ectopic pregnancy occurred in 58 women varying in age from 15 to 41, an average age of 28 years and 9 months. Twenty-eight of these women had missed menstrual periods, but none more than two periods, and 30 had had no change in period time. Twenty-one gave a history of menstrual disturbance in past life, either irregularity in time or dysmenorrhea. In 26 cases, there was a history of previous pregnancies varying in number from one to ten. Of these, nine patients had had miscarriages and abortions and seven had had previous ectopic pregnancies, two interval pregnancies, one a full term and one a miscarriage. All denied venereal infection. Nausea accompanied 26 cases, vomiting 24 cases and fainting in various degrees accompanied 30.

Pain was a constant symptom in all cases and was the initial symptom in 48 cases. In all the cases except 11, it could be described as follows: A sudden, intense sharp pain in the lower abdomen, in most instances on the affected side. It was unreferred except in seven cases and in five of these the pain was referred to the right shoulder; in one case the pain started in the back and was referred to the affected side, and in one it was referred to the leg, then becoming dull and intermittently increasing in severity on the affected side.

In one case, the pain which was sudden and extremely intense, appeared in the right upper quandrant accompanied by marked rigidity and tenderness of this same area, and with extreme shock. It was never referred to the affected side. This complex was probably due to pressure from the massiveness of the hemorrhage that occurred with rupture. In the remaining cases, ten in number, the initial pain was a persistent dull pain starting from one to six weeks before the intense pain appeared. In all but 22 instances pain was followed by vaginal hemorrhage which varied in quantity, from a reddish brown discharge, constant in some and intermittent in others, to a moderate flow. In ten cases the vaginal hemorrhage was the first symptom noticed and in the remaining 12 there was no vaginal hemorrage. Physicians were not consulted in any case before pain and hemorrhage but were called within periods varying from immediately after hemorrhage to six weeks later. In only 14 cases was the pain and hemorrhage followed by shock.

Physical Examination

The temperatures varied from 98 to 103, with an average of 99 1/10 degrees; the pulse from 64 to 140 with an average of 94, ranging from poor quality to good. Blood counts revealed the following: Red from 2,000,000 to 4,800,000, depending on severity of the hemorrhage; leukocytes from 6,500 to 26,000; polymorphs from 59 to 93, with an average leukocyte count of 12,300 and polymorph 77. Breast changes were noted in eight cases, with tenderness in all and rigidity on the affected side in 53 cases, varying in degree. Bimanual examination revealed a softened cervix and slight increase in size of the uterus in 35 cases, with a soft mass in the right tubo-ovarian region in 25 and in the left tubo-ovarian region in 11 cases. In two cases a mass was felt in the cul-de-sac and in two cases a firm mass in the right tubo-ovarian region was found. In the remaining cases no mass was palpated. A positive preoperative diagnosis of ectopic pregnancy was made in 35 cases. The pathologist reported all cases to have been tubal pregnancies except one which was tubo-ovarian. Seven of the pregnancies were located in the isthmus, 20 were ampullar and four interstitial and in the remainder the location was not noted. In only 13 cases was any pathology noted that might have been a causative factor; in one there was a small fibroid near the cornua of the uterus on the affected side and in 12 a salpingitis was found in the opposite tube. In one case the opposite tube was removed because in situ it had the appearance of possibly also being pregnant but the pathologic report showed it to be a hydrosalpinx. All of the patients recovered except two and the cause of death in these instances was recorded by the physician in charge as intestinal obstruction and toxemia.

In concluson, I believe that should a woman of child-bearing age appear for examination with a history of past irregular menstrual life, a missed period with or without previous pregnancies, and with or without a history of previous pelvic conditions, venereal or otherwise; complaining of sudden, intense pain in the affected side, accompanied by nausea and vomiting; uterine hemorrhage, spotting or moderate in type, and fainting; and examination reveals tenderness, rigidity, increased size of uterus, with a small, soft mass in either tubo-ovarian region, with slight tempera-

ture, a moderate leukocytosis, increased polymorph count and a mild secondary anemia, one can feel reasonably certain that a diagnosis of ectopic pregnancy is correct. Further, while the treatment of the condition is not a part of this paper, and though I am unable to show but one full term pregnancy in this list of cases, my search through other reports has convinced me that subsequent normal pregnancies do occur often enough to make the removal of the opposite tube an error, unless there is a definite pathologic condition present.

Discussion

Dr. J. W. Osborn, Des Moines. I only want to say to Dr. Hennessy that twenty-seven years ago last October I did my first ectopic operation, and the woman has since borne a son, a daughter and twin daughters.

Dr. Emil C. Junger, Soldier. It is about twenty-nine years ago that I encountered my first and only ectopic pregnancy. I was forced to operate on a Sunday morning. I lived in a valley where you could not get a train on Sunday, and if it rained a little during the week you could not get a train on a week day because the track would be washed out. This left me alone and isolated, even without a telephone. The patient had a large family at that time, five or six children. When I saw her the case was diagnosed as appendicitis, since she had pain on the right side. No history could be elicited, because my Norwegians do not pay attention to menstrual periods. They do not know when they had their last period or whether they ever had one. They just go along and live normally.

Dr. Hennessy said that an ectopic pregnancy is a sign of degeneration or reversion to type. I think the reason we are not having them out there is we are not degenerating; we are not reverting to type.

Dr. Hennessy stated that all patients who had ectopic pregnancy denied venereal infection. If women know something about venereal infection, they know something about what is going on in the world. They have experimented. That is to blame for a lot of these ectopic pregnancies.

Pain in the affected side was not a symptom in this case of mine. It took me about eight hours to convince the family that this patient should be operated upon, and by that time her abdomen was almost as large from blood distension as it would be at term. When it became evident that something should be done, they consented. At that time I drove a team, and they were livery horses and could not make a mile a minute. After I had obtained the family's consent, I had to go back home and get some instruments and try to locate a nurse. We had no telephone in those days, and it was some time before I got into that abdomen, but I scooped out a gallon or so of blood clot and tied off the left tube because the right tube was all right. I left the rest of the blood in to feed the patient, instead of buying hormaboloid at a dollar a bottle. The patient got along all right, although she had many rheumatic symptoms for months to come.

So my little contribution, even if not so scientific, leads to the conclusion that in these days in the normal community where the people live a normal sexual life and behave themselves, there is about one ectopic pregnancy every thirty years (the life of the average active practitioner).

Dr E. B. Woods, Valley Junction. Some of the recent work which has been carried on in relation to the Aschheim-Zondek reaction in testing pregnancy might be of interest in this case, should the possibility of better laboratory equipment in this part of the country become a fact.

One of the recent articles in the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION has brought out a new and simplified technic for this procedure, heretofore considered very complicated. It consists of injecting into three-months-old doe rabbits, different amounts of the urine of a woman who is pregnant or thought to be pregnant. Good results have been obtained upon operating, exposing, and examining the ovaries some twenty-four to forty-eight hours after this injection. This procedure might be of aid in the diagnosis of pregnancy and would lend additional information in cases of acute, sudden lower abdominal pain.

REPORT OF VIOLENT INJURY REQUIRED BY NEW LAW

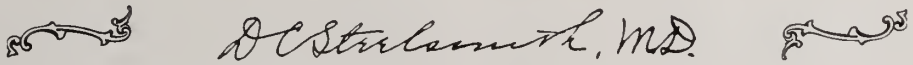
We have been asked to call to the attention of the physicians of the state, the fact that a new law of vital interest to medical practitioners has recently been passed and are below quoting from a letter received from the Assistant Attorney General:

"This department on behalf of the Bureau of Investigation desires to call to your attention Chapter 51, Laws of the 44th General Assembly, which provides that any physician or surgeon, osteopath, osteopathic physician, or chiropractor, shall, within twelve hours after an application is made for treatment of an injury received through violence, report the same to the sheriff of the county giving the name, residence, if possible, and a brief description of the injury. This act was passed by the last General Assembly in order that it might assist the law enforcing officers in ascertaining or discovering criminals who may have been wounded during an attempted or a completed crime."

DR. SCAMMON RETURNS TO THE UNIVERSITY OF MINNESOTA

Dr. Richard E. Scammon, who left the University of Minnesota a year ago to become dean of medicine and biological sciences at the University of Chicago, will return to Minnesota this fall to be dean of medical sciences, a new position created by the Board of Regents. Dr. E. P. Lyon will continue as dean of the medical school, while Dr. Scammon's duties will include stimulating interest in medical science in the other departments of the university as well as in the medical school.

State Health Commissioner's Page



The most prevalent diseases as reported for the month of September were whooping cough, scarlet fever, diphtheria, poliomyelitis, mumps, chickenpox, and smallpox in the order named.

WHOOPING COUGH

Ninety-two cases of whooping cough were reported during the month. This is an increase of thirty cases over the number reported for August and is 52 cases more than those reported for September, 1930. The average number of reported cases for the month of September for the last eight years is 45.

SCARLET FEVER

Fifty cases of scarlet fever were reported. This is the lowest number for September since 1927, and although there was an increase of 14 cases over those which occurred in August, this number is less by 44 cases than that reported for September, 1930. During nine months of 1931, 2,343 cases have been reported as compared with 2,072 for the corresponding period of 1930.

DIPHTHERIA

For the first time this year, the number of cases of diphtheria exceeded those reported for any months last year. Thirty-three cases were reported for September, this year, as compared with 17 cases for the corresponding month last year. For the first nine months of 1931, there were 220 cases as compared with 258 cases for the same period of 1930.

The 33 cases reported last month were scattered among 17 counties, Sioux City accounting for seven cases and Waterloo for four. Three occurred in Cass county, two each in Dubuque (City), Floyd, Jasper, Johnson (Iowa City), Polk (Des Moines); the remaining nine counties having one each. There must be no neglect of the administration of toxin-antitoxin to the children who are new to the various parts of the state by reason of new births or immigration if the low incidence which has been enjoyed for the last year is to be maintained.

POLIOMYELITIS

Thirty-four cases of poliomyelitis were reported from 14 counties, as compared with 85 cases from 26 counties last year. Seventy-four cases were reported for the first nine months of the present year while 111 cases were reported during the same period of 1930. Only one case occurred previous to July in 1930 (in the month of April), while 13 cases were reported during the first six months of 1931. These were distributed as follows: January, seven; February, one; March, three; April, one; May, none; June, one; leaving sixty-one cases; two for July, twenty-five for August, and thirty-four for September.

MUMPS

Nineteen cases of mumps were reported. An average of 13 cases has occurred in September for the last eight years.

CHICKENPOX

Seventeen cases of chickenpox were reported. The average number of cases for September for eight years is 13.

SMALLPOX

For nine months of 1931, there have been 1,653 cases of smallpox as compared with 2,850 cases for the same period of 1930. Seventeen cases were reported in September, 1931.

TYPHOID FEVER*

Only 14 cases of typhoid fever were reported for the month. These were scattered among 12 counties, only Boone County having more than two cases. The first nine months of the present year show a total of 54 cases as compared with 62 cases for a like period in 1930. The current 54 cases are less by eight cases than the total for nine months of any year since 1923, and 129 less than the high record of 183 for nine months of 1927. Although the season is drawing to a close, it is not yet too late for local outbreaks to occur. Milk and water supplies should be carefully supervised and the movements and occupations of known carriers controlled.

*See editorial page 634.

SPECIAL ARTICLE

RELATIONSHIP OF STATE MEDICINE AND CIVIL PRACTICE*

FRANK L. WILLIAMS, M.D., Des Moines

(Continued from October Journal)

PART II

I shall discuss in a short manner the branch of state medicine which the writer has reason to be rather familiar with, that of the treatment of the ex-service man under the War Risk Insurance Act, and later the World War Veterans' Act and amendments thereto, an act which is apparently the fruit of a generous nation's desire to care for those who fought its wars.

An historical review of legislation for soldiers of various wars of our country indicates a progressing desire on the part of the people of the country to do more at each war for the returned soldiers. Uniquely enough, soldiers have benefited most by this trend towards state medicine, as it is notorious that we soldiers never retreat, but always push forward, with bayonet ahead in war and open hand ahead in peace.

Primary legislation was intended to provide compensation and treatment to those who were disabled in the war. This primary legislation, however, has been continuously amended, until at the present time, any honorably discharged ex-service man is eligible for treatment by the U. S. Veterans' Bureau under the act, which reads as follows:

Section 202 (10) states: "That all hospital facilities under the control and jurisdiction of the bureau shall be available for every honorably discharged veteran of the Spanish-American War, the Philippine Insurrection, the Boxer Rebellion, or the World War, suffering from neuropsychiatric or tuberculous ailments and diseases, paralysis agitans, encephalitis lethargica, or amebic dysentery, or the loss of sight of both eyes, regardless whether such ailments or diseases are due to military service or otherwise, including travel expenses as granted to those receiving compensation and hospitalization under this act. The director is further authorized, so far as he shall find that existing government facilities permit, to furnish hospitalization and necessary travel expenses incident to hospitalization to veterans of any war, military occupation, or military expedition, including those women who served as Army nurses under contract between April 21, 1898, and February 2, 1901, not dishonorably discharged, without regard to the nature or origin of their disabilities: Provided that any and all laws applicable to women who belonged to the Nurse Corps of the Army after February 2, 1901, shall apply equally to members of the Army Nurse Corps who served under contract between April 21, 1898, and February 2, 1901, including all women who served honorably as nurses, chief nurses, or superintendents of said corps in said period: Provided that preference to admission to any government hospital for hospitalization under the provisions of this subdivision shall be given to those veterans who are financially unable to pay for hospitalization and their necessary traveling expenses; Provided further, that where a veteran hospitalized under the authority of this subdivision is financially unable to supply himself with clothing, he shall also be furnished with such clothing as the director may deem necessary; Provided, further, that where a veteran entitled to hospitalization under this subdivision is suffering from a disease or injury necessitating the wearing of a prosthetic appliance and is financially unable to supply himself with same, upon an affidavit to that effect the director is hereby authorized to furnish such appliance and to effect necessary repairs to the same without cost to the veteran; And provided further, that the pension of a veteran entitled to hospitalization under this subdivision shall not be subject to deduction, while such veteran is hospitalized in any government hospital, for board, maintenance, or any other purpose incident to hospitalization; Provided further, that the Act of May 4, 1898, entitled 'An Act making appropriations for the naval service for the fiscal year ending June 30, 1899, and for other purposes,' the Act of February 28, 1861, as amended by the Act of February 2, 1909, relative to the Government Hospital for the Insane in the District of Columbia, or any other Act, in so far as they are inconsistent with the provisions of this section be, and they are, hereby modified accordingly.

"In the insular possessions or territories of the United States the director is further authorized to furnish hospitalization in other than government hospitals."

The present potential load to be cared for by the Veterans' Administration is five million, consisting of veterans of the World War, Spanish-American War, Philippine insurrection, Boxer Rebellion, and Civil War. Since the provisions of this act allow for hospitalization of ex-service men irrespective of when or how they received their disabilities, in 1929, forty-three per cent of the hospital patients, which amounted to approximately thirty thousand, in fifty hospitals, were hospitalized for conditions not traceable to service, irre-

*Presented before the Polk County Medical Society, March 31, 1931.

spective of the fact that legislation has been enacted allowing for the elapse of five years from date of discharge, or January 1, 1925, whichever may be the latest date, for the development of the following diseases to a ten per cent degree; neuropsychiatric diseases, spinal meningitis, active tuberculous disease, paralysis agitans, encephalitis lethargica and amebic dysentery.

In 1924, during and immediately after the passage of the Reed-Johnson Bill, many protests regarding the liberality of the act were voiced. The American Medical Association briefly summarized them in an editorial of January 23, 1926, as follows: "The trend of veterans' relief legislation is towards state medicine. Through paragraph ten of Section 202, World War Veterans' Act, 1924, the Federal Government brings the generalization of state medicine in our body politic and enters directly into competition with the private practitioners and the private hospitals of the country. Under the provisions of that paragraph the government now treats, at public expense, diseases and injuries having no relation to government service, military or otherwise, including veterans of the Spanish-American War, Philippine Insurrection, Boxer Rebellion, and World War, suffering from neuropsychiatric or tuberculous ailments and diseases, paralysis agitans, encephalitis lethargica, amebic dysentery, or from loss of sight of both eyes. They are entitled as a matter of right to treatment and care in hospitals under the Veterans' Bureau at government expense, whether or not their disabilities are of military origin. Veterans of any military organization or military expedition from 1897 are entitled to that treatment when the director of the Veterans' Bureau finds facilities available, no matter what may be the nature of the disability or no matter what may be its origin. The government also pays travel expenses incident to such treatment; preference is supposed to be given to those financially unable to pay. The only condition the applicant must comply with is to prove illness or injury, to abandon home physicians and the hospitals of his own place of residence and to enter a hospital for treatment by physicians paid by the government. Immediately after this act, within a year, 13,000 persons had claimed treatment under it. Bills are now pending before Congress to assure to every beneficiary under Section 202 (10) of the World War Veterans' Act, 1924, outpatient treatment in addition to the hospital treatment already authorized, and to grant outpatient treatment to Spanish-American War nurses, contract surgeons and contract dentists. Another bill proposes to assure a like benefit of hospitalization to all disabled ex-service men between states. Another bill contemplates entitling all civilian employees who served overseas to hospitalization at any time for the rest of their lives, for any disease or disability; and there are other bills yet to come."

The trend of the legislation would seem also to take into consideration persons who served overseas with the American Red Cross, Salvation Army, Y. M. C. A., Knights of Columbus, and other organizations; civilian employees who did not or could not serve overseas; members of the draft boards, government employees generally, persons employed in ship yards, ammunition factories, and other essential industries, seem to be equally entitled to consideration. Apparently men who fell out of their bunks or got dandruff are on a parity with those who were maimed in No Man's Land.

At about this same time, the then president of the American Medical Association, W. D. Haggard, stated that "under the terms of this act a large number of men, without regard to their financial status, are to be provided with hospital care and medical and surgical treatment at government expense as long as they live, for diseases and injuries without regard to the origin of such diseases or injuries. The only condition is that they leave family, friends, and home, and enter a government hospital. This looks very much like state medicine, pure and simple. It requires only one step more to confer similar privileges on the wives, widows, and on the children of veterans under this act, and such a step would not be inconsistent with what has already been done. The privilege conferred is not dependent on any relationship between the disease or injury and any military service."

At that time, March 28, 1925, the American Medical Association adopted a resolution whereby every honorable effort was to be made to secure an amendment to the Veterans' Act, which had to do with not granting federal free medical and surgical services except to those whose disabilities had been caused by the war; or at least to restrict such services to men unable to pay.

The bureau has fifty-five hospitals throughout the country and fifty-four regional offices, each of the latter equipped with a clinic rendering not only examinations for compensation purposes, but rendering outpatient treatment to many claimants. The bureau also maintains a follow-up treatment service wherein a nurse, under the guidance of a physician, makes periodic visits throughout the state, on persons suffering from certain types of diseases, especially tuberculosis, to assist in their adjustment, both medical and social, whenever

possible. At such visits, instruction is imparted as to further care and manner of living, in an attempt to assist the soldier in his rehabilitation problems.

The relationship of the Veterans' Bureau to the patient involves at least two phases; the psychology of the Veterans' Bureau patient and the psychology of those in charge of the Veterans' Bureau patient. The patient must not be considered as a supplicant, but as one who is entitled to what he receives. He may be interested only in the adjudication of his claim for compensation; he may be antagonistic, or at least not enthusiastic regarding his treatment. He is apt to resent restrictions as harking back too much to military dicipline. If he is hospitalized at Washington or any other section where he might have access to a Senator, Congressman, or any other representative, he resents restrictions which would prevent his visiting his representative if he so desires, irrespective of his disease.

The attitude of the physician in charge of the patients must not be that they are loafers, trying to take advantage of a generous government, but he should accept them as sincere and honest fellowmen until they are proved otherwise. While there may be much chaff among the wheat, it is better to find the chaff while searching for the wheat, than to overlook one kernel of wheat in our over-enthusiastic search for the chaff. The physician must lend a sympathetic ear not only to the claimant's ailments, but to his mental illnesses; he must be painstaking in administering medical care so that the patient will realize that he is giving him the best that is in him. He must make the patient know that he is not just an official, but an individual, and has his interests at heart. Many things are necessary to inculcate this thought in the patient. One of the foremost things is to accord a very careful and complete clinical examination. It is thought, too, that when the examination is completed, a full, frank discussion of the claimant's condition with him, is worth while. On the whole, the relationship of the bureau physician to the patient is not different from that of a private physician to his patients, other than considering the above factors.

It may interest you to know something of the rating of disabilities from diseases and injuries. In accordance with the provisions of Section 202, Subsection 4, World War Veterans' Act, approved June 7, 1924, a schedule, taking cognizance of the occupation of the injured veteran at the time of enlistment, was prepared by the United States Veterans' Bureau. Prior to the said provision of law, the Schedule of Disability Ratings of the United States Veterans' Bureau was based solely upon averages, with no recognition of occupation of the individual claimant. The preparation of the Schedule of Disability Ratings, under the terms of the Act of June 7, 1924, required pioneering effort on the part of the United States Veterans' Bureau. There are few, if any, precedents available upon which to base the necessarily highly complicated and technical evaluations of disabilities as influenced by the extraordinarily large number of occupations in the United States.

The Schedule of Disability Ratings now in use by the United States Veterans' Bureau and put into effect January 1, 1926, consists of two tables, which are independent and interdependent: Table I, a list of Occupational Ratings, and Table II, of Disability Ratings.

Table I is an alphabetically arranged list of occupations, a representative cross-section of the various activities in agriculture, mining, commerce, professions, etc., of American life. There are one thousand of these selected occupations. Opposite each occupation appear seventeen variants, representing various body parts, indicating estimates of the relative functional importance of the body part concerned, with respect to the occupation in question.

The diseases of the heart and pericardium are included under the caption "Chest," general arteriosclerosis comes under the caption "Systemic;" while localized arteriosclerosis would fall under the part of the body affected, as for instance, chest, leg, arm, etc.

If the established occupation of the claimant at the time of enlistment does not appear in the list, an inquiry is made of the claimant regarding the type and functional requirements of his occupation, and the examiner selects a similar occupation from the list.

Table II consists of a list of injuries and diseases arranged, to facilitate reference, into separate tables, as follows:

1. Amputation, fracture, deformities, and their sequelae
2. Dental and oral
3. Eye, ear, nose and throat
4. General medical
5. Neuropsychiatric
6. Respiratory system and tuberculosis, pulmonary and other forms
7. Surgical
8. Combined table

Opposite the list of diseases and injuries there appears a series of nine occupational variants which are determined by and are carried over from the rating in Table I.

USE OF THE TABLES

Since the introduction of this Schedule of Ratings in 1926, it has worked satisfactorily in the adjudication of compensation claims of disabled ex-service men.

The regular members of the Regional Rating Board, in cooperation with the Adjudication Division of the regional office, determine the occupation of the claimant at the time of enlistment, before the medical rating is assigned. The occupation given in the record of the Adjutant General's Office or the Bureau of Medicine and Surgery of the United States Navy is accepted.

The occupation at the time of enlistment having been satisfactorily determined, the disease or injury is next ascertained. Thereupon the medical examiner first refers to Table I, locating the appropriate occupation. The disease or injury occurring at the reading junction of the occupations with the applicable injury variants are references to the occupational variants (1-9) in Table II. Turning to Table II, the medical examiner reads and assigns the percentage of disability occurring at the reading junction of the injury list and the column reference (from 1-9) given in Table II. Multiple disabilities are combined in accordance with the instructions in the Combined Rating Table of the Schedule.

In the adjudication of the claims for compensation the following terms are used to signify the extent of disability as well as the degree of impairment:

1. Temporary Partial (T. P.)—A disability of a permanent nature in which the degree of impairment of earning capacity may be from 10 per cent up to and inclusive of 99 per cent.

2. Permanent Partial (P. P.)—A disability of a permanent nature in which the degree of impairment of earning capacity may be from 10 per cent up to and inclusive of 99 per cent.

3. Temporary Total (T. T.)—A disability of a temporary nature in which condition there is 100 per cent disablement.

4. Permanent Total (P. T.)—A disability of a permanent nature in which the disablement is equivalent to 100 per cent.

5. Double Permanent Total (D. P. T.)—Any combination of those disabilities which entitles the beneficiary to an award of permanent total disability.

It may also interest you to know that in April, 1929, disability compensation was being paid at the rate of one-eighth of a billion dollars annually.

The Disability Allowance Act of July 3, 1930, however, wherein any veteran of the World War would be eligible for an allowance for all diseases and injuries, with some exceptions, irrespective of how or when the disability arose, has greatly increased the sum paid.

In conclusion then, it would seem that any scheme dealing in business problems must be judged ultimately by the effect it has upon the individual whom it is designed to help; if this is true, a plan of medical service must be judged by its effects on those in need of medical advice and treatment and the quality of the service rendered. Because of its technical character, the essential feature of a competent and efficient medical service is trained and informed personnel.

Any problem either developed from within the profession or imposed upon it from the outside affects the public as a whole. Many ask in sincerity, why some of the factors, apparently so successful in business, should not be applicable to the medical profession. Every scheme of organization and function is based upon an elementary unit of operation. In medicine that unit is care, treatment, and advice to patients. In industries, the unit is material, tools, machinery, and so forth. The latter group can be nearly completely standardized.

An effort is being made to standardize the human being through standard mass education and industry, but it is thought that while medical service may in a manner approach standardization, full medical service designed to serve individual patients will never get away from the necessity of dealing with the problems of individuals.

There are two sides to the question, state medicine or civil practice. Each becomes more acute with time. State medicine, primarily preventive, has by legislation become preventive and clinical. Because of the various forces, political, social, economic, industrial, educational, and religious, that are ever with us and register their effect on both the physician and the patient, it is necessary that the physician know about and work with these forces that make the atmosphere in which man's mind and body live. Thus can he more intelligently trace effects to their cause and more wisely counsel his patient, and the more should he recognize his own outstanding power in the community and the power of concerted action, both for himself and the public welfare. Let us remember then, that the steady progress of past legislation would seem to make for state medicine existing in time, if not now, and that past progress is indicative of a continued trend.

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QUACKERY AND LAW ENFORCEMENT

Second only to the high quality of professional services rendered their patients by its members, the Iowa State Medical Society has probably made its greatest contribution to the health and welfare of Iowans through close cooperation with the authorities in the effort to curb quackery. Despite the cry of "persecution" invariably raised by the apprehended quacks, the state society and its members have responded loyally to the need for protecting the public from untrained and irregular practitioners who continually seek to enter the professions of the healing arts.

Enforcement of the practice acts is in the hands of the various county attorneys, the Department of Health through its Law Enforcement Division, and the attorney general's office. These enforcement activities cover each and all of "certain professions affecting the public health" as governed by Chapter VIII of the Iowa code and include: medicine and surgery, osteopathy, chiropractic, nursing, dentistry, optometry, pharmacy, podiatry and embalming. Enforcement of these laws began in earnest in 1929 with the appointment of a member of the attorney general's staff as special counsel for the Department of Health and the creation of the Law Enforcement Division in the department. The duty of the law enforcement officer, who began work July 1, 1929, is to secure evidence of violation of any and all of the nine practice acts, and so numerous were the complaints and violations that it was necessary to add a second officer this year. The assistant attorney general assists the county attorneys in the preparation of cases and if necessary heads the prosecution.

Remarkable results have been achieved in the first two years. While divers persons have been stopped from various violations of each of the practice acts, yet the majority have been illegally practicing medicine, because it is the most desirable field and the most difficult to attain. Hence, of approximately 150 persons who have been stopped from illegal practice in the past two years, nearly 100 were violating the medical practice act. A few of the more interesting practice cases which are typical of the whole group, are given below.

It has seemed to many laymen, as well as to members of the medical profession, highly inconsistent that a cult which was founded upon opposition to drug therapy and whose schools do not afford such instruction, should be violating the laws of the state by prescribing or prescribing and furnishing medicine, which is by the code forbidden to any but a licensed doctor of medicine. That such is the case as far as numerous osteopaths are concerned is a matter of common knowledge. Considerable interest was therefore attached to three cases recently instituted against osteopaths who were charged with violating the medical practice act. The first was that of Rollo Hook, D.O., of Logan, in Harrison county, retiring member of the board of osteopathic examiners. Last July suit was brought to enjoin him permanently from the practice of medicine; the case was not contested and a permanent injunction was granted. In September cases were brought against two other osteopaths, W. H. McPheeters of Des Moines and E. B. Groves of Waterloo, on the grounds that in using the injection treatment for hemorrhoids and varicose veins they were practicing internal curative medicine as well as prescribing and furnishing. Neither of these cases has come to trial, but there are indications that both of them will be contested.

Thus far there have been no cases against chiropractors for the practice of medicine, although in one or two instances a call from the enforcement officer who pointed out the limitations of their licenses, resulted in a discontinuance of such practices. Indeed, not only do most chiropractors seem opposed to any departure from the tenets of their cult, but several of these practitioners have themselves requested that a test case be brought to determine whether or not they may use light therapy and electrotherapy under the law.

With Norman Baker at their head, a considerable number of smooth-talking, plausible gentry have been operating a fairly lucrative racket in Iowa for some time past. Baker having been permanently enjoined by the Supreme Court of Iowa from further operation of his cancer institute, has leased the institution, which is now operated under lease by a licensed M.D., but with an apparent decrease in the number of patients.

One of the most picturesque of recent fakers was Dyar, the "health evangelist," who appeared

first in Centerville with an up to the minute medicine show which had as its crowning feature a morning and afternoon clinic at which individual diagnoses and treatments were given. He later operated in Albia, then in Marshalltown, and finally turned up in Boone, where the law enforcement officers, the attorney general's office and the local authorities jailed him and secured a $1,500 cash bond which he jumped to leave the state, since when the Boone county grand jury has returned an indictment.

If J. Rufus Wallingford and Blackie Daw had been in Iowa the past few weeks they could have learned a new lesson in high finance by following in the footsteps of J. C. Wagner and his accomplice. One afternoon late this summer, a rather distinguished looking gentleman appeared at the door of a Sac City resident whose wife was suffering from a chronic ailment, introduced himself as from Des Moines and explained that the other gentleman, who was out in the car, was Dr. Charles Mayo of Rochester. It seems that "Dr. Mayo" had heard of the woman's affliction and might be prevailed upon to take the case. The upshot of it was that the two gentlemen left later in the afternoon, with a cashier's check for eight hundred dollars, which the Sac City resident could charge only to experience. Reports that these two gentlemen are continuing to operate in Iowa have come to the State Department of Health and every effort is being made to locate them.

Western Iowa has recently been afflicted by a man variously known as "Fink," "Fenk," and so forth, who has in most cases represented himself as having been sent by some prominent oculist to call upon the victim. Glasses purchased from this "special representative" cost sixty dollars or upwards, according to the financial means and gullibility of the patient. While this gentleman has thus far evaded the officers, he is an excellent example of one type of faking that is going on in this state today, and the cooperation of the medical profession, particularly the doctors whom he is claiming to represent, will eventually result in his apprehension.

In Waterloo, Peter L. Mavrelis, who has operated the Mavreline Company Laboratory for some six years, had apparently got into the habit of diagnosing and prescribing instead of merely selling his medicines. Evidences of this practice were so numerous that the judge at the first hearing enjoined Mavrelis from practicing medicine.

In Mason City an organization known as the "International Goiter Institute" had been operating for some time with one or more laymen actively engaged in managing its affairs. This institute has closed its doors without legal action upon the advice of the Law Enforcement Division of the State Department of Health.

J. I. Class Health Institutes have recently sprung up in several Iowa cities and the one in Cedar Rapids was chosen as a test case with the prospect that it may go to the Supreme Court for final adjudication. A class health institute makes principal use of various kinds of "fumes," but is not above electrotherapy, light therapy, and so forth. As these institutes are operated by laymen, they present a very definite legal problem in medical practice.

It was discovered last year that Iowa was harboring a new cult—naprapathy; in fact, the enforcement officer assigned to the job found that one of them had been practicing in Cedar Rapids for some twenty-five years without any type of license; that he was an officer of the National Naprapathic Association and that a brother practitioner in Burlington was also an officer of the same organization. Injunction suits were started against each in the district courts. The Linn county case resulted in an adverse decision and an appeal has been made to the Supreme Court. The Burlington case is to come to trial in Des Moines county shortly.

Not only has it been necessary to stop various types of unlicensed practitioners from practicing medicine, but numerous physicians having licenses to practice medicine have come to the unfavorable attention of the department. In several instances it has been found that men fully qualified to secure licenses, by reciprocity or otherwise, had merely failed to do so; and these defects and oversights have been remedied.

The most important of these cases has had to do with the revocation of the license of Dr. Hanson of Wright and Humboldt counties. This case has been before the courts for several years and is involved in a number of complicating court orders. The case seems now on the way to a definite conclusion.

One case worthy of note is that of M. C. Graham, Des Moines, who was indicted for manslaughter and for practicing osteopathy without a license by the Polk county grand jury October 23 of this year. The indictments were occasioned by the death, from a ruptured appendix, of a nine-year-old girl whom Graham had allegedly been treating by osteopathy. No rule of law has ever been laid down in Iowa as to what responsibility rests with a person (either licensed or unlicensed to practice one of the healing arts) who shows wanton disregard for human life either through ignorance or carelessness and it is hoped a ruling of the Supreme Court may be secured in the above

case which will definitely establish what the law expects of all those engaged in one of the healing arts and the duties required under the law.

A general problem which is common to all of the nine groups included in Chapter VIII is that of the corporate practice of a profession. At least one important case has already gone to the Iowa Supreme Court, in which it was found that the Bailey Dental Company, being a corporation, could not practice dentistry, regardless of the number of licensed dentists employed and the fact that they only were treating patients. The attorney general has ruled that this decision is applicable to every profession and every type of corporation so that even an incorporated county medical society may not legally enter into a contract with a board of supervisors. The International Goiter Institute, mentioned above, and various other corporations, have recently either dissolved or gone out of business as a result of the Bailey Dental Company decision.

Iowa also has faith healers. The principal one to have come to the attention of the law enforcement officers was that of Peter Quigley of Decatur county. Quigley has been enjoined by the district court from the practice of medicine and it is interesting to note that his friends and supporters went so far as to have introduced in the last legislature a bill to legalize the practice of faith healing.

While no question of law enforcement is here involved, yet a discussion of quackery in Iowa would not be complete without reference to the organized opposition to public health and scientific medicine to be found in many quarters of the state. It is both unfortunate and significant that the Farmers Union in its state meeting should have gone on record as opposed to the county health unit, as well as the cattle testing law. Without discussing the pros and cons of the latter proposition, the adoption of such a resolution is evidence of an illiberal attitude. The Farmers Protective Association, which seems to exist primarily for opposition to the testing of cattle for tuberculosis, has at various places lent itself to anti-pasteurization campaigns and other anti-public health activities. The Peoples Protective Association has not been heard of so much since Baker's radio station, KTNT, was taken off the air, but its sole and avowed purpose was to combat the "Medical Trust." The Medical Liberty League, an offspring of the American Liberty League, which was a union of patent medicines and spiritualism, has been fairly active in Iowa during the past two or three years, especially in connection with opposition to county health units, anti-quarantine programs and campaigns against immunization and vaccination.

While it might seem at first glance that such anti-medical activities were merely propaganda movements which have their inception in the cult theories, yet the immediate effect is to tear down respect for and confidence in medicine and surgery and to prepare a fertile soil in which the quack and faker may flourish.

ARE CASE REPORTS ROUTINE?

Many physicians engrossed in the problems of their daily practice find making of case records or case reports irksome and whenever possible delegate this necessary work to an assistant. All modern physicians realize the value to be gained from carefully kept case records, but many of them fail to appreciate the value of case reports requested or required by officially organized agencies. This is especially true when the physician does not understand the use which is to be made of the required case report. The following citation taken from the records of the Iowa State Department of Health clearly exemplifies the value of typhoid case reports and emphasizes the tremendous importance of this service to the citizens of our state.

"From January 1st to September 30th, fifty-four cases of typhoid fever were reported in Iowa. Of these, forty-seven case records were filed with the department. On October 15th, a case record was received with the notation, 'can't decide,' for the 'probable source of infection.' Two days later a letter was received from the doctor who made out the records which referred to this notation, and he reported that certain suggestive information had later come to him and that conditions warranted investigation. He reported that he had instructed the wife of his patient to set out her own container and have her milkman pour his milk into it and take his bottle away immediately, not allowing it to enter the house. When these instructions were passed on to the milkman, he remonstrated and said that such a procedure was not necessary, since he had been delivering milk to another home where there was a case of typhoid fever and that he had left his bottles there as usual and had picked them up the next day. This patient had been ill since September 3d, and had not been reported to the local health officer nor to the State Department of Health. The doctor had learned indirectly of another case of typhoid fever in a person who also was a customer of the same milkman. This made three cases on the same milk route.

"Investigation by a representative of the State Department of Health was made on Monday, the 19th of October. It disclosed that the informa-

tion above quoted was correct. The milkman was seen in company with the health officer and the attending physician (the one who had returned the first case record) and the dairyman admitted that he had had typhoid some eleven years ago, and that two of his children had had typhoid in the interim. He was inclined to be cooperative when asked to furnish specimens of feces and urine for examination by the laboratory.

"These specimens were furnished and on October 23d, and again on October 27th, the laboratory reported that B. typhosus had been found in the feces. The report dated October 23d bore this notation, 'almost a pure culture of typhoid, only a few coli.'

"Pending the examination by the laboratory, the dairyman was forbidden to handle milk in any way, and of course this injunction has been made permanent. This dairyman supplied forty-six families with milk. Only three cases occurred and no deaths when there might have been thirty cases and several deaths, had not a case record been made out by the attending physician, the other two cases discovered, and an early investigation made."

While this citation is perhaps as spectacular as any which might be cited from the records of the State Department of Health, it is typical of many others which have been followed to a successful conclusion by the department. Every physician must accept a responsibility for the health condition of his community, and in accepting this responsibility, cooperate to the fullest extent with organized health agencies, particularly the Department of Health created and maintained by the state.

THE ANNUAL CHRISTMAS SEAL SALE

The annual Christmas Seal Sale of the National Tuberculosis Association has become recognized as symbolic of the greatest health movement which the world has ever known. This year commemorates the twenty-fifth anniversary of the sale in this country. It is just a quarter of a century since Emily Bissell, having read Jacob Riis' article on the Danish Christmas seal, introduced the seal sale into America in a small way at Wilmington, Delaware, and with the backing of the big Philadelphia newspapers made an immediate success of it. A Christmas seal sale letter, which will be sent out the day after Thanskgiving this year by a local Christmas seal chairman, begins with this sentence: "Santa Claus may not knock at as many doors here this Christmas as he did last but tuberculosis will knock at more." The fact stated in the first half of this sentence is doubtless one great cause of the truth of the second half. Reduced circumstances mean a reduced scale of living; a reduced scale of duced resistance generally means illness of various kinds, including tuberculosis. In view of the economic depression which prevails it is logical to assume that there will be a greater need for the work done by Christmas seals the coming year than ever before.

In the twenty-five years since the Christmas seal has been sold and its funds applied to the conquest of tuberculosis, the death rate in the United States from tuberculosis has declined from 201 per 100,000 population to 76. The death rate last year in Iowa was 33.3, the third lowest in the country. In the last 25 years in the nation the number of sanatoria has increased from 100 to more than 600 and from less than 10,000 beds to 80,000 beds. In place of six dispensaries and clinics there are now 1,060 permanent and 2,565 temporary clinics. Twenty-five years ago there were practically no tuberculosis nurses, no open air schools and no preventoria. There are now nearly 100 preventoria and fresh air camps, 1,000 open air schools and over 3,000 tuberculosis nurses with upwards of 15,000 generalized public health nurses doing some tuberculosis work.

Christmas seal funds have broadened their scope. In various localities in Iowa they are making possible such health projects as school health inspections, dental inspections, visiting nursing, fresh air camps, tuberculosis and heart clinics, summer round-up, diphtheria immunization, teaching of health habits in schools, pre-school child health work and the supplying of schools with health equipment.

Physicians will be especially interested in one phase of the work of the National Tuberculosis Association aside from its leadership in the organization field. About ten years ago the National Tuberculosis Association developed a plan of scientific research for the study of tuberculosis in the attempt to find a specific remedy for the treatment of the disease. This committee of medical research, headed by Dr. William Charles White, utilizing well established research laboratories, has inaugurated investigations which bid fair to open the way for a solution of their problems.

An analysis of the tubercle bacillus chemically has been accomplished and the constituent substances prepared for animal experimentation. When a definite knowledge of the effect of these chemical substances upon living tissues is known, the mechanism of infection from this organism may be solved.

It has already been shown by one of the committee that the tubercle bacillus will not grow except in the presence of monocytic cells. The problem of breaking the affinity between the monocyte

cell and the tubercle bacillus, if it can be solved, will obviously go a long way toward solving the question of a cure or preventive for tuberculosis.

Other problems confront the Medical Research Committee. Is it possible to smother the tubercle bacillus, so to speak, by taking away from it the substances necessary for its growth? Does it live in symbiotic relationship with other bacteria or cells? Are its food requirements unique and, if so, can the body soil be so changed that infection cannot take place but body function satisfactorily maintained?

With the use of the newer technic of chemistry, biology and biochemistry, the National Tuberculosis Association has learned more about the tubercle bacillus and its ways within the last few years than the committee had thought possible when its studies were begun. This study, however, is not yet complete. There is reason to hope, in the opinion of the chairman, Dr. White, and those who have watched the work of the committee, that the studies are along the right lines and that out of them will come many observations and discoveries that should prove of great benefit to all humanity.

Two of the most practical contributions to the study of tuberculosis within the very recent past are, first, the purification of tuberculin so that results from its use are sure to be uniform, and second, the ability to make x-ray pictures free from blurring and of standardized depth of shadow. Both of these contributions increase the physician's ability to make accurate and early diagnoses, which in turn increases the hope of cure.

Space does not permit a greater discussion of the accomplishments of the Tuberculosis Association. This great health organization, whose leadership has ever been in the hands of the medical profession, in celebrating this, their twenty-fifth anniversary, look to the physicians everywhere for staunch support. Iowa has never failed and will not do so this time. Put your shoulder to the wheel and help make this campaign adequate to the increasing needs of 1932.

THE UNIVERSITY DEPARTMENT OF HEALTH

Nearly ten thousand young men and women from all parts of Iowa are enrolled each year in the State University. It is of statewide importance that strict supervision be kept over the health conditions under which these students live.

The ideal way of handling these conditions is, no doubt, through city and University cooperation. The University has organized a Department of Health, conducted by Dr. Milford E. Barnes, head of the Department of Hygiene and Preventive Medicine, and Dr. A. V. Hardy, Associate Professor in the same department. This year-old department is not only able to check up on the food and living conditions of the students, but it also maintains a student outpatient division.

It operates through five divisions: The Divisions of Communicable Disease, Life Extension, Student Outpatient, Inspection, and Records. A chief heads each division and is aided by a staff of assistants drawn from various faculties.

By this grouping, it is possible for the department to aid materially in controlling the health hazards of students due to their personal habits, living conditions, sanitation of University buildings, and to the food handling, public water, and milk supply establishments. Other factors contributing are University activities involving gymnasium, swimming pools, outdoor sports, and group association, such as occurs in the intermingling of a large student body.

All cases of diphtheria, tuberculosis, and communicable maladies that come to the University hospitals are carefully investigated, both as to the source of the illness and to the possible exposure of other people.

In September of 1930, 432 students were given complete physical examinations by the Life Extension Division of the University health department. In October, 626 students were examined, and through the rest of the year up to May more than 500 additional examinations were made.

These examinations were conducted by the Life Extension Division full-time physicians, Dr. Grace Williams and Dr. Lawrence Hanson, the staff of the Outpatient Division, and additional part-time physicians. None but fully qualified physicians are employed in this service.

If maladies are found, the person examined is advised, but not obliged, to take remedial measures. Students are privileged to seek medical service of private physicians or at the University Hospital. If it is necessary to go to the University Hospital, minimum rates are charged.

Freshmen are all required to take the physical examinations and any upper classman may avail himself of this opportunity. It is interesting to observe that each year a larger number of them are realizing the advantages of such an offer.

The Life Extension Division does still more. It requires every food handler in the dining rooms of the University, as well as the fraternity and sorority dining rooms, to have physical examinations. In addition, this requirement is extended to include nurses and all employees of the University Hospitals. To be on the positive side, all of the workers who are carriers of typhoid, diphtheria, venereal diseases or tuberculosis are barred from service in

the hospitals or dining rooms. Moreover, all employees must agree to notify the Life Extension Division if they come in contact with or are affected by any communicable disease. Under these conditions a permit to work is granted which is revocable if the employee does not live up to his agreement.

The Student Outpatient Division, a unique feature of the University Department of Health, employs three full-time physicians and a nurse and is housed in ten completely outfitted rooms. It can readily be seen that the best possible care can be given to any students who are ill and desire medical attention of any sort. Nominal charges are made for office and room calls. Over 6,500 patients were treated by the division during the last school year.

The benefits of remedial and preventive work of this nature cannot be stated definitely. However, it is interesting to note that the number of services rendered by the Department of Health for the different divisions, from September 1, 1930, to May 31, 1931, ranged as follows: Communicable Diseases, 60 (cases investigated); Life Extension, 8,533; Student Outpatient, 6,871; Inspection, 3,103. These statistics furnish some insight as to the service rendered.

The fact that there is a department of this kind, functioning in a highly efficient manner, should be reassuring to physicians and citizens of all parts of the state that the State University is not only a safe place for students, but also that students returning from the University will not disseminate contagious diseases in their respective communities.

A COOPERATIVE PLAN FOR MEETING THE PRESENT ECONOMIC STRESS

An agreement has recently been effected between the Medical Society of Milwaukee County, the Milwaukee Hospital Superintendents' Association, the Physicians' Service Bureau and the Milwaukee County Institutions whereby the private hospitals and the medical profession agree to assume responsibility for the "borderline" cases, or those temporarily distressed because of economic conditions. In commenting on the plan, Mr. W. L. Coffey states, "This movement by the Medical Society and the hospitals will do much to relieve the county hospitals and fill the gap. We have unusual demands made upon us by those 'borderline' cases and I am sure they would prefer private attention."

The plan proposes the lowest possible fee for persons who because of the present economic distress find themselves unable to pay the regular hospital and medical charges. These patients will be admitted to private institutions and treated as private patients rather than making them public charges and placing them in county hospitals.

Dr. E. L. Tharinger, president of the Medical Society of Milwaukee County, in commenting on the plan said, "The Medical Society is gratified with the action taken by the hospitals. The Health Council suggested this step several months ago. A number of physicians are extending credit as are some of the hospitals, but organized effort to care for the people who have gone unwillingly to the county and other charitable institutions has been needed. There is danger that some may take unfair advantage but the welfare of the public must be considered first. All we ask is for the patient to be frank and honest."

Mr. L. C. Austin, president of the Hospital Superintendents' Association, indicated that all persons who own property or have financial resources but who are temporarily in financial straits because of economic conditions would be cared for on a basis of extended credit on hospital costs.

We will watch with interest the operation of this program since it appears to be basically sound and one which deserves thoughtful consideration by other medical groups.

THE AMERICAN COLLEGE OF PHYSICIANS

The Sixteenth Annual Clinical Session of the American College of Physicians will be held in San Francisco, California, April 4-8, 1932. The headquarters in San Francisco will be the Palace Hotel, where the general scientific sessions, registration, and exhibits will be held. Clinics will be conducted in various hospitals and institutions in and about San Francisco.

Dr. S. Marx White, Minneapolis, president of the college, has in charge the selection of speakers and subjects on the general program, while Dr. William J. Kerr, San Francisco, Professor of Medicine at the University of California Medical School, is the general chairman of the session, and is responsible for all local arrangements, in addition to the arrangement of programs and demonstrations. Following the San Francisco session a post-convention tour will be conducted through Yosemite Valley, Southern California and the Grand Canyon of Arizona.

The attention of society secretaries is called to the above dates, in the hope that their societies will select non-conflicting dates for their 1932 meetings.

CENTENARIANS IN NEW YORK STATE

The deaths of twenty-seven centenarians (twelve men and fifteen women) were recorded in New York State, exclusive of New York City, in 1930. The ages as given in the death certificates ranged from one hundred to one hundred and twelve years. Two of these old people had never married, twenty-four were widowed, while the spouse of one was still living. Fifteen were native born; three were natives of Germany, three of Ireland, two of Italy, and one each of Austria, England, Nova Scotia (a sailor), and Poland.

The Secretary discusses:—

The 1932 Annual Session

The annual session, to be held in Sioux City, May 4, 5 and 6, 1932, will be distinguished by four exceptional features. The guest speakers are men of outstanding character; the entire program is to be of a symposial nature; the morning clinics are to be continued; and unusually interesting entertainment is planned by the Woodbury County Medical Society.

The Program Committee is pleased to announce that the following guest speakers have accepted places on the program: medical guest, Cyrus C. Sturgis, M.D., Professor of Internal Medicine, University of Michigan Medical School; surgical guest, Dean D. Lewis, M.D., Professor of Surgery, Johns Hopkins Medical College; eye, ear, nose and throat guest, William V. Mullin, M.D., Cleveland.

Five symposia will compose the entire program, each being the subject of a half-day session. The kidneys and the blood will be the topics for discussion Wednesday morning and afternoon respectively. Neurology and cancer will be Thursday's symposial subjects. Pediatrics and preventive medicine will conclude the program on Friday morning.

The early morning clinics, which have met with such approval in the recent annual sessions, will be continued this year. The guest speakers will as usual take a prominent part in the conduct of the clinics and Sioux City, with its excellent facilities, will afford a plenteous supply of clinical material.

As host to the society at the 1932 annual session, the Woodbury County Medical Society is laying careful plans for unusual and worthwhile entertainment. The details have not yet been announced, but those who have attended previous sessions at Sioux City will know that this part of the annual meeting is one to which they may well look forward.

In addition to the scientific program, the coming session is of great importance, because of the many vital matters to come before the House of Delegates. The first session of the House of Delegates will probably be called for Tuesday, May 3d, so that as in the last two years, the sessions of the House of Delegates will not interfere with attendance at the scientific meetings. Thus, despite the fact that the meeting place is not in a central location, it is expected that the unusually strong program to be offered and the importance of the coming session to the profession as a whole, will not only prevent a decrease in attendance, but may result in one of the largest assemblies which the Iowa State Medical Society has ever held.

Robt. L. Parker

Secretary

THE OPEN FORUM

MEDICAL LEGISLATION

Editor Journal Iowa State Medical Society:

The Open Forum through the Munger letters, has given publicity to sentiments that I have proclaimed vocally as occasion offered, and in particular at the recent conference of presidents and secretaries of county societies called by the councilor of this district.

However, I went further. I took exception to the whole plan of campaign; holding it a waste of time and money to make appeals to the legislators with emphasis on "pro bono publico." The regular profession, on the record of past performance—specifically, the practically free gift of sign-posts against disease, and the whole-hearted response to the call of distress in public and private calamities—is entitled to what it asks; or it is not, and the showdown has been too long avoided. At the least, a stand on this platform would be convincing to the hitherto skeptical that profit by indirection is not in contemplation; and there would thus be a final release from the opprobrium which was the aftermath of the original combination with homeopathy and eclecticism.

It is my misfortune to have been an eye-witness to the evolution of medical legislation. I use the expression advisedly, because, in my more than fifty years' inside knowledge (I was registered in Illinois before coming to Iowa) of the trials and tribulations in the strife for a proper medical law, I am unable to figure the "play as worth the candle." After much labor, certain heretics were eliminated; only to be supplanted by others with more foresight, and so impregnable. It is the old story. False gods always have had, and always will have, supposedly intelligent followers. But the falser the god, the sooner the followers desert. Not only that, but the search for a true god is thereby stimulated. Witness homeopathy and eclecticism. And a chiropractic neighbor insists that osteopaths will be regular doctors within

H. B. Young, M.D.

MONROE COUNTY RESOLUTIONS

The following resolutions were unanimously adopted by the Monroe County Medical Society at its regular meeting held at Albia, Iowa, August 6, 1931:

Resolved that we approve the past policies and great work of the Iowa State Medical Society when it was controlled and managed unselfishly, by the whole profession of Iowa.

That we protest against the high-handed, unfair and improper methods practiced by the state office of the Iowa State Medical Society in regard to the component county societies.

That we disprove of the action of the Board of Trustees in recommending, and of the House of Delegates in passing an amendment increasing the annual dues to $12.00 per year. We consider this act was entirely unnecessary and detrimental to the welfare of the Iowa State Medical Society, and that this Society can be properly managed under the present annual dues.

We recognize that the enormous expense almost bankrupting our treasury is due to the managing director, to whom Secretary Parker gives 99 per cent of the credit for our activities in the State Society.

We maintain the State Society cannot be of benefit to the people of Iowa and a credit to the physicians under the present management. That the State Society is carrying a heavy burden in the person of Mr. Blank and his usefulness has long since gone, and we hereby suggest that the Board of Trustees dispense with his service, and ask for his resignation at once, hereby preventing the disruption of the Iowa State Medical Society in the near future.

We wish to call the attention of the members of the Society to the fact that the officers did not give a full financial report of the condition of the Society at the 1930 meeting, on account of the poor showing it would make. We believe the members of the Society are entitled to a correct report of the affairs of the society at all times.

Furthermore, we recommend that the State Society take action to retain the present annual dues of $7.50 per annum and prevent the loss of one-fourth of the membership next year.

We are strenuously opposed to having a layman appointed as managing director of the Iowa State Medical Society and representing the medical profession of Iowa.

We deplore the fact that the State Society is now run through the state office by a small clique, who has hand picked every present officer and committee of the society.

We hereby heartily endorse the Marion county delegates report of the Iowa State Medical Society and express ourselves in favor of a thorough investigation of the conditions and facts therein expressed.

We approve fully the resolutions of the Twin Lakes Medical Society in regard to contract and insurance practice of medicine.

We hereby propose to offer an amendment at the 1932 annual meeting whereby each Councilor District of the Iowa State Medical Society elects its own councilor by its county delegates.

Be it further resolved, that a copy of these resolutions be printed and mailed to all medical officers in Iowa, and every physician in the Ninth Councilor District, and a copy be sent to the Iowa State Medical Journal for publication.

Monroe County Medical Society.

T. A. Moran, Secretary.

Speakers Bureau Activities

October Placements

Carroll County Medical Society, Carroll.....October 1
J. V. Treynor, M.D., Council Bluffs—Pediatrics
J. B. Thornell, M.D., Council Bluffs—Pediatrics

Bremer County Medical Society, Sumner.....October 2
Chest Clinic—
"The Beginnings of Tuberculosis"—John H. Peck, M.D., Des Moines.
"The Management of Goiter"—C. B. Luginbuhl, M.D., Des Moines.

Scott County Parent-Teacher Association, Davenport...October 3
"Preventing the Diseases of Childhood"—M. E. Barnes, M.D., Iowa City.

Ninth District, Iowa Pharmaceutical Ass'n, Council Bluffs.....October 5
"Cooperation Between the Two Professions"—M. A. Tinley, M.D., Council Bluffs.

Eighth District, Iowa Pharmaceutical Ass'n, Clarinda..October 6
"Cooperation Between the Two Professions"—F. K. Burnett, M.D., Clarinda.

Kossuth County Federated Women's Clubs, Algona.....October 6
"Periodic Health Examinations"—T. E. Davidson, M.D., Mason City.

Iowa State Ass'n of Registered Nurses, Des Moines.....October 6
"The Modern Health Movement"—W. A. O'Brien, M.D., Minneapolis, Minn.

Austin Flint-Cedar Valley Medical Society, Algona....October 6
"Simplified Management of Diabetes"—R. N. Larimer, M.D., Sioux City.
"Consideration of Gall-Bladder Diseases"—L. D. Powell, M.D., Des Moines.
"Preventive Medicine"—T. U. McManus, M.D., Waterloo.

Scott County Medical Society, Davenport.....October 6
"Diagnosis"—F. J. Rohner, M.D., Iowa City.

Marshall County Medical Society, Marshalltown.....October 6
"The Gall-Bladder and Liver"—J. F. Herrick, M.D., Ottumwa.
"Functions of the Liver and its Pathology"—F. A. Hecker, M.D., Ottumwa.

Federated Women's Club, Spencer.....October 6
"The Doctor and the Club Woman in Relation to Public Health Work"—Vernon D. Blank, Des Moines.

Sixth District, Iowa Pharmaceutical Ass'n, Ottumwa...October 7
"Cooperation Between the Two Professions"—H. A. Spilman, M.D., Ottumwa.

First District, Iowa Pharmaceutical Ass'n, Burlington..October 8
"Cooperation Between the Two Professions"—Geo. B. Crow, M.D., Burlington.

Sixth District, Iowa Pharmaceutical Ass'n, Newton....October 9
"Cooperation Between the Two Professions"—Robert L. Parker, M.D., Des Moines.

Jones County Medical Society, Anamosa.....October 9
Chest Clinic—
"The Recognition of Tuberculosis"—Wm. Spear, M.D., Oakdale.
"Rational Tuberculosis Therapy"—John H. Peck, M.D., Des Moines.
"The Treatment of Heart Disease"—H. W. Rathe, M.D., Iowa City.

Eleventh District, Iowa Pharmaceutical Ass'n, Sioux City.....October 12
"Cooperation Between the Two Professions"—Wm. Jepson, M.D., Sioux City.

Mt. Union Parent-Teacher Ass'n, Winfield.....October 13
"The Conquest of Disease"—C. A. Boice, M.D., Washington.

Tenth District, Iowa Pharmaceutical Ass'n, Algona...October 13
"Cooperation Between the Two Professions"—M. J. Kenefick, M.D., Algona.

Clayton, Fayette, Winneshiek, Allamakee Medical Societies.....October 14
"Therapeutics"—Robert L. Parker, M.D., Des Moines.

Fouth District, Iowa Pharmaceutical Ass'n, Charles City.....October 14
"Cooperation Between the Two Professions"—R. A. Fox, M.D., Charles City.

Calhoun County Medical Society, Rockwell City.....October 15
"General Principles in the Management of Fractures"—K. R. Werndorff, M.D., Council Bluffs.
"General Talk on Abdominal Surgery"—Donald Macrae, Jr., M.D., Council Bluffs.

Fifth District, Iowa Pharmaceutical Ass'n, Cedar Rapids.....October 15
"Cooperation Between the Two Professions"—B. F. Wolverton, M.D., Cedar Rapids.

Richland Parent-Teacher Association, Richland.....October 15
"The Unseen Enemies of Children's Health"—Clyde Watts, M.D., Williamsburg.

Second District, Iowa Pharmaceutical Ass'n, Maquoketa.....October 16
"Cooperation Between the Two Professions"—F. J. Swift, M.D., Maquoketa.

Grundy County Medical Society, Grundy Center.....October 16
Chest Clinic—
"The Beginnings of Tuberculosis"—John H. Peck, M.D., Des Moines.
"Functional Disorders of the Heart"—D. J. Glomset, M.D., Des Moines.

Third District, Iowa Pharmaceutical Ass'n, Waterloo...October 19
"Cooperation Between the Two Professions"—W. A. Rohlf, M.D., Waverly.

Dallas-Guthrie Medical Society, Panora.....October 22
"A General Discussion of Peptic Ulcer"—J. C. Hill, M.D., Newton.
"The Acute Ear"—A. D. Woods, M.D., State Center.

Palo Alto County Medical Society, Emmetsburg.....October 23
Chest Clinic—
"Essentials in Tuberculosis Treatment"—John H. Peck, M.D., Des Moines.
"Congestive Heart Failure"—D. J. Glomset, M.D., Des Moines.

Community Meeting, Emmetsburg.....October 23
"The Menace of Rheumatism"—D. J. Glomset, M.D., Des Moines.
"The Scourge of Childhood"—John H. Peck, M.D., Des Moines.

Parent-Teachers Association, Mitchellville.....October 26
"The Growing Child"—Ben C. Hamilton, Jr., M.D., Jefferson.

Eighth District Federated Women's Club, Leon.....October 27
"The Value of Social Restraints"—Frank A. Ely, M.D., Des Moines.

Madison County Medical Society, Winterset.....October 30
Chest Clinic—
"Diagnosis and Treatment of Cardiac Arrhythmias"—C. B. Luginbuhl, M.D., Des Moines.
"Present Day Treatment of Tuberculosis"—John H. Peck, M.D., Des Moines.

A New Record

The Bureau established a new record last month in sending forty-five speakers to thirty-one meetings. This number compares very favorably with that of long established bureaus. In order to keep this comparison favorable, however, we must make this number of talks an average month instead of a record one. To do this, we need help. The Bureau is still a new project in the state. There is a tremendous lot of work to be done in educating the public to secure its health speakers from proper sources. Here is where the individual physician, the county medical society, and the woman's auxiliary can be of infinite value to us. Let people know that the Iowa State Medical Society maintains a Speaker's Bureau, and that the list of speakers is carefully selected and kept up to a certain definite standard. Only part of this can be done by correspondence. Repetition of this information will make the Bureau a familiar name to the public. We are anxious to reach the schools, service clubs, luncheon clubs, women's clubs, Y. M. C. A., Y. W. C. A., and Farm Bureaus, in every locality in Iowa. This lay education program is one of the most important activities in the state society and is fundamental to the success of many others.

The Bureau is always anxious to promote programs among the county medical societies. With the beginning of the fall programs, there are being presented many new interesting and valuable facts gleaned from the study during the summer months. The county medical society secretaries are urged to send in the names of any of their members who have presented especially good papers which should be shared and enjoyed by the members of other societies. Now is a good time to schedule competitive exchange programs between county medical societies of similar size.

SOCIETY PROCEEDINGS

Allamakee County

Members of the Allamakee County Medical Society were hosts Tuesday, September 29, to physicians from Clayton, Fayette and Winneshiek counties, when fifty-five doctors met at Postville and listened to the following scientific program: Common Skin Troubles, Erwin Schenk, M.D., of Des Moines; Fractures of the Upper Extremities, Howard L. Beye, M.D., of Iowa City, and Indications for Caesarian Section, Nicholas Schilling, M.D., of New Hampton.

Carroll County

Thursday, October 1, the Carroll County Medical Society started its fall activities. Twenty-five physicians were present and entered widely into the discussion of the very fine papers given on Nephrosis and Nephritis by Joseph Thornell, M.D., and Jack Treynor, M.D., both of Council Bluffs. Dr. Thornell's paper was written from the pediatrician's point of view, and Dr. Treynor's from the viewpoint of the eye, ear, nose and throat practitioner. A motion to revise the fee bill at this time was laid on the table. Also a similar motion to enter into a county contract with the county supervisors was tabled.

Walter A. Anneberg, M.D., Secretary.

Cerro Gordo County

The Cerro Gordo County Medical Society held its regular meeting Tuesday, October 27, at the Mercy Hospital in Mason City. The meeting was called to order at 7:30 by the president, Dr. C. E. Wright, and the following program put on by members of the staff: Rheumatic Heart Disease, E. L. Wurtzer, M.D.; Infant Edema in Relation to Maternal Albuminuria, C. M. Franchere, M.D., and Carcinoma of the Stomach, with report of case, B. R. Weston, M.D. After the program a brief business meeting was held, following which the Sisters of the Mercy Hospital served a light lunch.

T. E. Davidson, M.D., Secretary.

Dallas-Guthrie Society

The regular meeting of the Dallas-Guthrie Medical Society was held Thursday, October 22, in Panora at the Panora Hotel, and the program was furnished by James C. Hill, M.D., of Newton, and A. D. Woods, M.D., of State Center. Dr. Hill spoke on Peptic Ulcers, giving a general discussion of the subject, and Dr. Woods addressed the physicians on The Acute Ear.

Des Moines County

Carl F. Jordan, M.D., director of the Des Moines County Health Unit, addressed members of the Des Moines County Medical Society, Tuesday, October 13, at a meeting of that organization held at Mercy Hospital. He told of the purpose of the health unit and how it functions. The work of the unit was reviewed, including examinations in the schools and the steps taken to prevent the spread of disease. Dr. H. B. Young, president of the society, reported on the restoration and repair of the grave of Dr. Edwin James.

Jefferson County

A meeting of the Jefferson County Medical Society was held Monday, September 21, in Fairfield, at which members of the Jefferson county board of supervisors and the hospital supervisors were special guests. Dr. John I. Marker of Davenport and Dr. C. A. Boice of Washington were present and talked to the group on the plan of caring for the indigent sick by contract between the county medical society and the supervisors.

Johnson County

Wednesday, October 7, the Johnson County Medical Society met in regular session and A. E. Lambert, M.D., spoke on Histogenesis of the Red Blood Cells, and Harry P. Lee, M.D., delivered an address on Intravenous Urography. The discussion was opened by W. H. Gibbon, M.D.

Keokuk County

William R. Cubbins, M.D., of Chicago, and Walter D. Abbott, M.D., of Des Moines, were the principal speakers at the meeting of the Keokuk County Medical Society held at Sigourney, Friday, September 25. Dr. Cubbins, associate professor in the department of surgery at Northwestern University School of Medicine, spoke on Injuries Around the Knee Joint. Dr. Abbott's address was on Head Injuries.

Lee County

A program featuring members of the faculty of the College of Medicine of the University of Illinois was presented before the Lee County Medical Society, Tuesday, September 29. Diabetes was the subject of an illustrated talk by Robert W. Keeton, M.D., Professor of Medicine. Nelson M. Percy, M.D., spoke on the general subject of appendicitis. He is professor of clinical surgery. Motion pictures of the surgery of the knee and back were shown by Dennis W. Crile, M.D., associate professor of surgery. The last paper on the program was Forceps Delivery, an illustrated address by W. J. Dieckmann, M.D., who is assistant obstetrician for the Lying-In Hospital of Chicago.

Linn County

Thursday, October 8, Isaac A. Abt, M.D., professor of pediatrics, Northwestern University Medical

School, spoke to the Linn County Medical Society on Anterior Poliomyelitis. The discussion of his paper was conducted by P. C. Jeans, M.D., of Iowa City, and L. M. Downing, M.D., of Cedar Rapids. Morgan J. Foster, M.D., of Cedar Rapids, presented a paper on Intussusception.

T. F. Hersch, M.D., Secretary.

Louisa County Annual Meeting

Dr. Richard C. Ditto, of Oakville, was elected president of the Louisa County Medical Society for the ensuing year, at the annual meeting of that organization held in Letts, Thursday, October 15. Dr. Thomas L. Eland, of Letts, was named vice president; Dr. L. E. Weber, of Wapello, re-elected secretary and treasurer; Dr. J. C. Pence, of Columbus Junction, elected delegate, and Dr. Elliott R. King of Letts, alternate. Members of the society completed arrangements for a contract with the Louisa county supervisors to render medical service to the indigent sick of that county.

Lucas County

Howard A. Lanpher, M.D., of Des Moines, state epidemiologist, was the principal speaker at the monthly meeting of the Lucas County Medical Society, held Tuesday, October 6, in Chariton. Dr. Lanpher's address stressed methods of combating the typhoid fever epidemic which had taken on unusual proportions in that locality during the past three months.

Marion County

The Marion County Medical Society met in regular fall session in the American Legion Clubs Rooms in Knoxville, Tuesday, October 27. Preceding the meeting the members, together with their wives and guests, partook of a six-thirty dinner at the Boylan Cafe. Following the dinner the ladies were entertained at a theatre party, while the doctors held their meeting which consisted of informal case reports. Each and every member was given an opportunity to "sound off" and each and every one present availed himself of this opportunity. This type of a program was a new venture, but since we have tried it with marked success, we are going to recommend it to our sister organizations. We had a banner attendance of thirty-two members and guests.

C. S. Cornell, M.D., Secretary.

Polk County

The regular monthly meeting of the Des Moines Academy of Medicine and Polk County Medical Society was held Tuesday, October 27, at the Hotel Fort Des Moines. The scientific program consisted of a lecture by Walter L. Bierring, M.D., on The Clinical Significance of Electrocardiography. Lantern slides of electrocardiograms were shown to illustrate the various conditions of the heart. The subject was further discussed extemporaneously by Harry A. Collins, M.D., Daniel J. Glomset, M.D., and Martin I. Olsen, M.D.

Scott County Seventy-fifth Anniversary

Members of the Scott County Medical Society observed the seventy-fifth anniversary of its founding at a banquet held in Davenport, Tuesday, October 6. Dr. Walter L. Bierring of Des Moines was the principal speaker, addressing the group on the past and present of medicine in Iowa, and the part Davenport and Scott county had played in this history. The text of Dr. Bierring's speech appears in the History of Medicine Section of this issue. Frank J. Rohner, M.D., of Iowa City, furnished the scientific paper for the program, taking for his subject the general topic of Diagnosis.

Tama County Meetings
A Correction

Owing to the misleading report of the House of Delegates which appeared in your Journal on page 374 of the July number, our Tama County Society has instructed me to send you the following report of meetings held during 1930:

January 7, 1930, Meeting at Toledo, twelve present. Business meeting.

February 21, 1930, Meeting at Garwin, twelve present. Paper—"Management of Breech Presentations," F. W. Gessner, Dysart.

April 24, 1930, Meeting at Toledo, ten present. Business meeting.

May 8, 1930, Meeting at Traer, thirteen present. Paper—"Goiter," E. T. Alford, Waterloo.

June 19, 1930, Meeting at Conant's Park, eight present. Paper—"State Medicine," A. E. Kepford, Toledo.

October 3, 1930, Meeting at Dysart, thirteen present. Paper—"Acute Anterior Poliomyelitis," J. F. Gerken, Waterloo. Report of House of Delegates, F. T. Launder, Garwin.

November 24, 1930, Meeting at Chelsea, nine present. Paper—"Birth Registration," C. W. Maplethorpe, Toledo. Paper—"Pelvic Infections," R. E. Keyser, Marshalltown.

December 15, 1930, Meeting at Toledo, eight present. Paper—"Reminiscences," A. A. Crabbe, Tama.

A. J. FARNHAM, M.D.
Secretary for 1931.

Washington County

Tuesday, October 6, the Washington County Medical Society met at the Washington County Hospital's Nurses Home, and listened to addresses by Morgan J. Foster, M.D., of Cedar Rapids, and W. F. Mengert, M.D., of Iowa City. Dr. Foster spoke on Intussusception, and Dr. Mengert on Obstetrical Problems.

Webster County

The October meeting of the Webster County Medical Society was held at Mercy Hospital on Tuesday, October 13. James A. Evans, M.D., of La Crosse, Wisconsin, gave a most interesting discussion of Gastric Ulcer—Benign and Malignant. Dr. Evans used x-ray plates and specimens to illustrate the points brought out. It was a most stimulating and worth while paper and was enjoyed by all members present.

John C. Shrader, M.D., Secretary.

Woodbury County

J. M. Krigsten, M.D., presented a paper on The Choice of an Anesthetic, at the regular meeting of the Woodbury County Medical Society, held Friday, October 2, at the Martin Hotel Ball Room in Sioux City.

Worth County

A meeting of the Worth County Medical Society was held Wednesday, October 7, in the office of Dr. H. A. Hartfiel in Northwood. The meeting was informal with discussions of matters of interest being conducted without a definite program.

Wright County

The members of the Wright County Medical Society met at the Hotel Moore in Clarion, Wednesday, October 7, for a dinner meeting at which Dr. L. R. Woodward of Mason City and Dr. W. W. Bowen of Fort Dodge were guests. During the course of the evening Dr. Bowen presented a paper on Common Fractures of the Forearm, illustrating his lecture with x-ray slides.

AUXILIARY NEWS

Mills County

New officers for the Mills County Women's Auxiliary are: Mrs. J. M. Donelan, of Glenwood, president; Mrs. I. U. Parsons, of Malvern, vice president; Mrs. Edgar Christy, of Hasting, secretary, and Mrs. J. G. McCue, of Silver City, treasurer.

Polk County

The Polk County Women's Auxiliary met with Mrs. H. A. Minassian, Tuesday, October 13. Other hostesses were Mrs. A. C. Page, Mrs. Thomas Burcham and Mrs. R. R. Simmons, who were assisted by Mrs. Channing Smith, president of the state auxiliary, and Mrs. Francis R. Holbrook. Parlor hostesses included Mrs. F. L. Wells, Mrs. Walter L. Bierring, Mrs. T. A. Minassian, Mrs. W. B. Hight, Mrs. John H. Peck, Mrs. E. J. Harnagel, Mrs. E. R. Posner. The very delightful program consisted of three piano numbers, played by Miss Winifred Glass, a member of the faculty of the Drake Conservatory of Music, and two readings by Mrs. W. D. Meek, a well known local dramatist. A short business meeting followed the tea, at which Mrs. Minassian presided. Those present will remember with pleasure Mrs. Minassian's beautifully decorated home and her rare hospitality.

Mrs. Tom B. Throckmorton.

News from Other States

Our national president-elect, Mrs. Walter Jackson Freeman, of Philadelphia, went to Europe the first of August, expecting to return the last of September, but has been detained indefinitely by the illness of her son who is in Munich with an attack of inflammatory rheumatism. However, Mrs. Freeman is taking care of her department in the Bulletin of the American Medical Association.

Every physician who receives the Journal of the American Medical Association also receives the monthly Bulletin which carries national Auxiliary news. If we cannot train our husbands to bring home this Bulletin, we might subscribe for it ourselves, since it will be sent to any address for 50 cents per year.

Our national president, Mrs. A. B. McGlothlan, attended the annual meeting of the Auxiliary to the Kentucky State Medical Society, Lexington, Kentucky, September 7-10. She reports many interesting features of that Auxiliary. Here are some of them:

Kentucky has a standard of excellence for her component auxiliaries. Points of excellence are acquired for various attainments, such as, the study of the state medical and health laws, the use of the National Auxiliary Study Programs, participation in the Jane Todd Crawford Memorial, review in each auxiliary of Gossett's "What the Public Should Know About Child Birth."

In Kentucky, each month, from four broadcasting stations a ten-minute health talk is given. Various physicians of the State Medical Association are selected to give these talks.

The Kentucky Auxiliary promoted a contest carried on in ten counties in which a prize was given to the school boy or girl writing the best essay on the value of a County Health Unit.

The value of the County Health Unit is emphasized by the New York State Health Commission reporting on those health needs of that state requiring legislative action before further progress can be made. The first item of the program is "A statewide system of county health departments (the County Health Unit) with full time health officers (to be required by law)."

If your Auxiliary is not informed of the nature and value of the County Health Unit, devote a meeting to the use of the study program on that subject supplied by the National Auxiliary.

In Tennessee, the State Auxiliary promotes a radio health talk every week, securing the talk from the American Medical Association in Chicago, and arranging with some physician to give the talk.

It is worth knowing that the American Medical Association will supply five-minute radio talks on seventy-two different health topics, and fifteen-minute radio talks on sixty-two different health topics.

The Woman's Auxiliary Department in the Florida State Journal has given its readers recently, in two consecutive months, interesting reports of the Philadelphia convention. One dealt with the convention at work, and the other with the convention at play. Such reports help to create an interest in the Auxiliary as an organization with national significance.

To give the Auxiliary women of Virginia a real knowledge of our national organization, the president, Mrs. J. Allison Hodges, is presenting serially "A Panoramic View of the Woman's Auxiliary to the A. M.

A. in Four Articles." These admirable articles were prepared last year for Mrs. Hunsberger's administration as follows: The Eastern District, Mrs. Wayne Babcock; North Central District, Mrs. James Blake; Southern District, Mrs. C. W. Garrison; Western District, Mrs. James F. Percy.

The president of the Texas Auxiliary, Mrs. H. R. Dudgeon, reported in Waco, July 14, that Texas had forty-three organized and working auxiliaries—and more coming. A good organization record to emulate!

INTERESTING NEWS

In Brief

The Fort Madison Medical Society has again offered its services in conducting an immunizing program against diphtheria in school children for this year. They have announced that toxoid will be used this year instead of toxin-antitoxin because of its greater efficiency, its painlessness and the fact that fewer injections are required to produce immunity.

At the recent meeting of the American Congress of Physical Therapy held in Omaha, a press room was provided at the convention headquarters since in the past many technical errors had been made in the reporting of scientific meetings and the officers of the Congress felt that this provision might eliminate these inaccuracies.

Charging that as many as 500 dogs a week are shipped from the Chicago dog pound to hospitals, medical schools and laboratories for experimental purposes, the Illinois Anti-Vivisection Society Tuesday filed suit in superior court to enjoin this disposition of the animals.

A $20,000 addition to the University Children's Hospital at Iowa City has just been completed. The new wing will house the orthopedic clinic, the dental clinic, the drug department, the cashier's office and the business office.

The work of raising $100,000 to give Spencer a new hospital is progressing nicely, $13,000 having already been pledged. Announcement has recently been made that the town of Spencer has been donated a site for the location of this hospital by a public spirited citizen.

Because of a growing demand for country doctors, Tufts Medical School has announced an annual scholarship to be awarded to five students who pledge themselves to practice for at least three years in rural communities after graduation.

The National Tuberculosis Association is giving consideration to an invitation issued by Des Moines to hold its 1934 session in this city. This important meeting is scheduled for Colorado Springs in 1932 and Toronto in 1933.

It has been reported that the new Lutheran Hospital at Fort Dodge may be closed to satisfy current debts. An effort is being made at this time to save the hospital through a campaign of public subscription.

Registration in the College of Medicine in the University of Iowa indicates a gain over last year's registration of nine students. Total registration this year is 373.

A recent announcement by the American College of Surgeons indicates that thirty-nine Iowa hospitals have been listed as fully approved by their hospital committee.

PERSONAL MENTION

Dr. O. C. Wilhite, formerly superintendent of the State Hospital for Inebriates in Knoxville, some twenty-five years ago, has returned as medical officer in charge of United States Veterans' Hospital No. 57 at Knoxville. He comes directly from Washington, D. C., where he was head of the neuropsychiatric section of the Veterans' Bureau.

Dr. Arthur Steindler, head of the orthopedic surgery department at the State University of Iowa College of Medicine, recently conducted an operation demonstration clinic at the Orthopedic Hospital at Lincoln, Nebraska.

Dr. Harold Schilling, of New Hampton, returned October 1, from his recent European trip, and is now visiting his mother and sister in Phoenix, Arizona, where he expects to locate.

Dr. J. L. Keane, of Dyersville, is spending several weeks at Fort Leavenworth, Kansas, where he is taking post graduate work in the Army Eye, Ear, Nose and Throat Clinic.

Dr. F. M. Whitsell and family have located in Millersburg recently, where Dr. Whitsell is establishing a home and the practice of medicine. Dr. Whitsell is a graduate of the Philadelphia School of Medicine and Surgery, and has had two years' work in Chicago hospitals.

Dr. E. E. Walkes has been named city physician for Ireton. He takes the place of Dr. T. E. McCaughan, who has left Ireton for San Diego, California. Dr. Walkes was graduated from Northwestern University College of Medicine and served his interneship at Ravenswood Hospital in Chicago.

Dr. Hawley Kerr, son of Dr. and Mrs. William Kerr, of Randolph, is now associated with Dr. R. C. Danley in the practice of medicine and surgery in Hamburg. Dr. Kerr was graduated in 1930 from Creighton University School of Medicine, and served interneship in Council Bluffs and Kansas City, Mo.

Dr. George A. Plummer is leaving Cresco soon for a two months' trip through European medical centers, spending most of his time at Vienna.

Dr. D. E. Camp, formerly epidemiologist of the Michigan State Department of Health, has been appointed deputy health commissioner by Dr. D. C. Steelsmith, and began his work about the first of October.

Dr. C. A. Boice, of Washington, addressed the Winfield Parent-Teachers' Association at a recent meeting, taking as his subject "The Conquest of Disease."

Dr. W. L. McConkie has been notified that he successfully passed the examinations recently given by the National Board of Otolaryngology at Indianapolis.

Dr. C. A. Angell, a graduate of Rush Medical College, has just finished his interneship at the Iowa Methodist Hospital in Des Moines, and is locating in Cascade, where he will be associated with Dr. F. S. Leonard of Dubuque.

Dr. T. E. Davidson, who was awarded a fellowship with the American College of Surgeons, left Mason City to attend the Clinical Congress of the College of Surgeons held in New York, October 12 to 16. On the way, Dr. Davidson will visit clinics at Chicago, Cleveland and Philadelphia.

Dr. R. J. Hennes, of Iowa City, has moved to Oxford, where he will open an office for the practice of medicine. For the past several months Dr. Hennes has been associated with Dr. George H. Scanlon, and the office at Oxford will be under the direction of Dr. Scanlon.

Dr. Daniel J. Glomset, of Des Moines, presented an address, "Building for Health," before the Webster City Woman's Club.

Dr. Benjamin F. McNeil, formerly of Brook, Indiana, has located in Clutier, which has been without a physician for several months.

Dr. Milford E. Barnes, of Iowa City, spoke on "Prevention of Disease of Childhood," Saturday, October 3, at a meeting of the Scott County Council of Parent-Teachers' Clubs.

Dr. Thomas Egan, formerly of Logan, has located in Varina.

Dr. William Jepson, of Sioux City, was one of the speakers at the one-day convention of the Northwest District of the Iowa Pharmaceutical Association held in Sioux City, October 12.

Dr. A. T. Harris, of Hastings, Nebraska, is now associated with Dr. G. E. Barr in Sioux City, limiting his practice to radium and x-ray therapy. Dr. Harris was graduated from the University of Edinburgh, Scotland, and practiced medicine in Grahanstown, South Africa, for nine years. Since that time he has been located at Hastings, where his practice was confined to x-ray diagnosis and treatment.

Dr. T. E. Davidson, of Mason City, spoke to the Kossuth Federation of Women's Clubs, Tuesday, October 6, on the objects of the periodic health examination.

MARRIAGES

The marriage of Miss Katherine Marie Loomis of Ann Arbor, Michigan, and Dr. Carl L. Gillies of Cedar Rapids, took place Friday, October 2, in Lincoln, Nebraska, at the home of Dr. and Mrs. H. S. Morgan. Dr. Gillies is an x-ray specialist, associated with Dr. A. W. Erskine, in Cedar Rapids, where the young couple will make their home.

Miss Ruby Iverson and Dr. William A. Bockoven, both of Cresco, were married Thursday, October 1, at the Lincoln Church in Cresco. The bride is a graduate of the La Crosse Lutheran Hospital and for the past year and a half has been employed at St. Joseph's Mercy Hospital in Cresco. Dr. Bockoven is associated in the practice of medicine with Dr. Kessell.

Wednesday, October 14, the marriage of Miss Isabelle Hollister of Fort Dodge, to Dr. William W. Stevenson of Rockwell City, took place at Fort Dodge, after which the young couple left for Chicago on a ten-day wedding trip. For two years Dr. Stevenson practiced medicine in Fort Dodge, being associated with Dr. E. F. Beeh, but in April of this year, he located in Rockwell City, where he and his bride will make their home.

DEATH NOTICES

Coldren, Cassius Milo, of Milford, died October 4, at the age of thirty-eight, after an illness of two months. He was graduated in 1919 from Rush Medical College. At the time of his death he was a member of the Dickinson County Medical Society.

DeWitt, Charles Herman, of Glenwood, died October 13, at the age of seventy-two, after a short illness. He was graduated in 1883 from the University of Illinois College of Medicine and was a charter member of the Mills County Medical Society.

Doolittle, John Comber, of Des Moines, died October 2, at the age of seventy-one, as the result of pneumonia. He was graduated in 1888 from Rush Medical College and at the time of his death was a life member of the Polk County Medical Society.

Lowery, Oscar W., of Des Moines, died October 18, at the age of eighty-six, as the result of heart disease. He was graduated in 1873 from the College of Physicians and Surgeons, Keokuk, and at the time of his death was a life member of the Polk County Medical Society.

HISTORY OF MEDICINE IN IOWA

Edited by the Historical Committee

DR. WILLIAM JEPSON, Sioux City
DR. ARTHUR D. WOODS, State Center
DR. FRANK M. FULLER, Keokuk
DR. WALTER L. BIERRING, Des Moines
DR. NORMAN F. MILLER, Iowa City

The Scott County Medical Society---Diamond Jubilee 1856-1931

WALTER L. BIERRING, M.D., Des Moines

As a native son it is a particular pleasure to join in this happy occasion, the seventy-fifth anniversary of the organization of the Scott County Medical Society. It is a further privilege to acknowledge that my first inspirations in the study of medicine were gained from those masters that form the most treasured traditions of your Society. As members, you honor yourselves to hark back for the moment into the yesterdays of Iowa Medicine and contemplate the course of events that have shaped the destiny of this Society from the time of the pioneer physician to this later day.

The story is closely entwined with medical progress in Iowa and with the march of civilization in this prairie country, for the doctor was ever in the forefront to blaze the trail of the pioneer. Some of this is personal reminiscence, but in a large measure it is gleaned from the historical records that are available. Acknowledgment is freely given to the interesting monograph, "Fifty Years in Iowa" by J. M. D. Burrows of Davenport, 1838-1888; "Davenport, Past and Present" by Franc B. Wilkie, 1858; History of Scott County by H. E. Downer, and lastly the first volume of Iowa Medical History edited by D. S. Fairchild.

For a brief period then, I invoke your imagination to live in the spirit of the past, when men were men and doctors helped make history in this part of Iowa. The Great River no doubt played an important role in the settlement of this region, forming a natural geographic boundary line, a ready means of transportation, with the nearby rapids to furnish abundant water power and the beautiful bluffs forming the background of a natural amphitheatre, extending from the river bank to the upland of fertile plain and prairie, all of which must have been most attractive to the pioneer settler in his trek to the West. We can fancy that the first white men to skirt the eastern border of Iowa, the woodsman Louis Joliet, and the missionary Jacques Marquette, in their momentous voyage down the Mississippi in 1673 tarried here and marveled at the beauty of this bend in the river and the future site of your city. For more than a century and a half Indians roamed over this prairie country, fur traders bartered for pelts with natives, and adventurers passed up and down the Mississippi. In 1833 the first house on this side of the river was built by Antoine Le Claire, locating it on what was called Le Claire's Reserve lying east of the present Harrison Street. This historic house has fortunately been preserved to the present day. Antoine Le Claire was one of the most interesting pioneers of this region. His father was a Canadian Frenchman and his mother a granddaughter of a Pottawattamie Chief. In the War of 1812, although surrounded by Indians hostile to the United States, he espoused the American cause, engaging actively in the service and was taken prisoner. In 1820 he married the granddaughter of the Sac Chief Acoqua, later entered the government service as interpreter, and was present in that capacity at all the important treaties with the Indians of this territory from 1825 to 1842. He was an accomplished linguist, speaking some twelve or fourteen Indian dialects as well as French and English.

At the treaty with the Sacs and Foxes in 1832 on this side of the river, the Great Chief of the Sacs, Keokuk, donated a reserve of a section of land to Mr. Le Claire's wife, on the condition that Mr. Le Claire should build his house on the section and on the spot then occupied by the marquee of General Winfield S. Scott in making the treaty, which condition was fulfilled the following year. Mr. Le Claire was one of the proprietors of the town of Davenport, its first postmaster, first justice of the peace, engaged actively in business, built the first hotel, acquired great wealth and is referred to as a leading public spirited citizen, a philanthropist and Christian gentleman. In 1858 he was elected the first president of the Settlers Association of Scott county.

The town site company was formed in 1835, the first meeting being held at the home of Colonel George Davenport on Rock Island, and the new town was named Davenport in his honor. The town site was

*Presented at Seventy-fifth Anniversary Meeting, Scott County Medical Society, Davenport, October 6, 1931.

purchased for the sum of two thousand dollars, being bounded on the east by Harrison Street, on the west by Warren Street, on the north by Seventh Street, and on the south by the river. In May, 1836, the lots were offered at auction. Some fifty or sixty lots were sold, bringing from three hundred to six hundred dollars cash. The remaining portion of the site was divided among the eight proprietors. During 1836 about a half dozen families came into the new settlement. In this year, also, the first Dr. E. S. Barrows located on this side of the river and his first patient was Antoine Le Claire. He made his first home a few miles below Davenport where the town site of Rockingham was laid out in the fall of that year. When Davenport was selected as the county seat two years later he changed his location to Davenport. At the close of the year 1836 Davenport had a population of less than one hundred, while Stevenson, (now Rock Island), possessed at this time a population of nearly five hundred. Doctor Barrows was the leading physician in Davenport for many years. For the first year and a half the nearest physician on the south was at Burlington, and on the north at Dubuque one hundred miles each way. The first resident physician in the town of Davenport was Dr. A. E. Donaldson from Wilkes-Barre, Pennsylvania, who came in July, 1837, but only remained two years. Dr. J. M. Witherwax came to Davenport in 1838, Dr. C. C. Parry in 1846, and Dr. James Gamble located in Le Claire in 1847, but aside from these there are no records of further additions to the profession until about 1850. The pioneer physicians of this territory were without doubt practical men of great force of character, who gave cheerfully of their talents to aid the sick. There must have been long journeys on horseback over country almost destitute of roads and encountering often swollen unbridged streams. Out of necessity they developed a rare quickness of perception and self reliance. As specialists were unknown they were called upon to treat any kind of ailment, being physician, surgeon, oculist, and dentist.

An interesting item is noted by Burrows, "In the spring of 1839, I officiated as pallbearer at the funeral of a Doctor Emerson, who died in the Le Claire House, and was the owner of the celebrated slave, Dred Scott. The burying place was at the corner of Sixth and Le Claire Streets."

Malaria evidently was a prevalent ailment in those early days, and it is stated that "Sappington's pills worked the steamboats up and down the river, as well as being the sheet anchor aboard boats and in many a household." These pills were prepared by a regular physician, Doctor Sappington, of Missouri, consisting of two grains each of quinine in boxes of four dozen each. The directions on the box were to take two to twenty pills as the urgency of the case required.

An interesting figure appears during this early period who was destined to have a profound influence on the development of medicine in Iowa and to gain eminence in another profession, that of law. This was John Forest Dillon who came to Davenport in 1838 when he was seven years old. At the age of seventeen years he entered the office of Dr. E. S. Barrows to begin the study of medicine. In 1848 he attended the first course of lectures given at the Rock Island Medical School. In 1849 this school was moved to Davenport becoming the College of Physicians and Surgeons of the Upper Mississippi from where he was graduated with the degree of M.D. in February, 1850. He was a charter member and present at the first meeting of the Iowa State Medical Society, June 19, 1850, at Burlington, after which he located at Farmington for the practice of medicine. It was during this time that he contributed the first article in the first issue of the Medico-Chirurgical Journal of Keokuk in September, 1850. This was the first medical journal published west of the Mississippi river. The subject was, "Rheumatic Carditis with Autopsical Examination," and was a distinct contribution to the medical literature of that early period. Being unable because of a hernia to ride on horseback he could not withstand the hardships of practice so returned to Davenport in 1851 where he opened a small drug store continuing for about a year, during which time he read law and was soon admitted to the bar. A few years later he was elected prosecuting attorney of Scott county. In 1858 he became judge of the district court being re-elected for a second term. In 1865 he was elected to the supreme court of Iowa. Soon after his re-election to the second term, in 1873 he was appointed by President Grant as judge of the United States Circuit Court which position he held until 1879 when he resigned to become professor of law at Columbia University at New York City, being then under fifty years of age. In association with Dr. W. F. Peck he was one of the founders of the medical department at the State University and from 1869 to 1879 was professor of Medical Jurisprudence in the Medical Law Department of the University.

It would be interesting to know the factors that influenced the formation of the Scott County Medical Society. The spirit of organization was no doubt stimulated by the founding of the American Medical Association in 1847 and the Iowa State Medical Society at Burlington in May, 1850, followed by the organization of county societies in Polk, Lee, Keokuk (City), Louisa, and Dubuque counties.

Your Society is the fortunate possessor of the original minutes from 1856 to 1865. In this interesting historical treasure is preserved the record of the organization. Here is stated "that pursuant to a meeting published in the daily prints, nine physicians met on the evening of October 18, 1856, in the office of Witherwax and Carter on Third Street west of Brady for the purpose of organizing the Scott County Medical Society." At this meeting committees were appointed to prepare a constitution and by-laws, a code of ethics and a fee bill. At an adjourned meeting on October 28, 1856, at the office of Fountain and Adler on Second Street between Brady and Main where thirteen physicians were present, the following officers were elected: Dr. Egbert

S. Barrows, President; Dr. Lyman Carpenter, Vice President; Dr. J. J. Tomson, Secretary; Dr. James Thistle, Treasurer. Censors: Dr. Thomas J. Saunders, Dr. John M. Adler, Dr. John W. H. Baker.

At a meeting on November 11, 1856, the constitution was signed and the fee bill adopted. The signers of the constitution constituting the seventeen charter members of the Scott County Medical Society were as follows: Lyman Carpenter, John M. Adler, William Keith, George W. Carter, John T. O'Reardon, W. N. Sine, Horace Carpenter, Thomas J. Saunders, John W. H. Baker, Lewis T. Pelton, Johnson J. Tomson, J. M. Witherwax, James Thistle, E. J. Fountain, C. C. Parry, E. S. Barrows, A. S. Maxwell.

After the organization and up to 1865 we find the following names inscribed: James W. McCortney, Alfred H. Ames, Ignatius Langer, Charles S. Shelton, James Gamble, James S. D. Wallis, Thomas Galt, W. A. Hosford, Thomas J. Iles, J. A. Church, W. F. Peck, James J. Mesic, S. D. Richardson, D. W. Stewart, L. French, Geo. E. McCosh, Geo. B. Harrison, Wm. H. Saunders, H. P. Hitchcock.

The object of the Society is stated in Article II of the constitution as: "The object shall be to promote the diffusion of true medical science among its members and to elevate the character of the profession in his community."

The Code of Ethics adopted was that which governed the American Medical Association. At the meeting on November 11, 1856, when the Code of Ethics and Fee Bill were adopted, the following motion was presented by Doctor Carter. Moved: That the Society consider the practice of rendering medical services by the year for a stipulated sum. This did not prevail, but the following resolution was unanimously adopted: Resolved that this Society discountenance the practice of being employed by the year and recommends that the members adhere as strictly as possible to the established Fee Bill.

The Fee Bill adopted presents several interesting features: Office advice with prescription ranged from one to five dollars, while a visit and advice in town was one to two dollars, on board boat it was two to three dollars; night calls were double; surgical fees were rated rather high in comparison with non-surgical services; capital operations such as amputation, lithotomy, and compound fractures ranged from fifty to two hundred dollars; tapping for dropsy, which now is regarded as a rather simple procedure was considered worth ten to twenty dollars; obstetrical attendance ten to twenty-five dollars, and instrumental delivery twenty to fifty dollars; gonorrhoea and syphilis (in advance) ten to fifty dollars. These fees by comparison are not so very different from the estimates for medical and surgical services prevailing seventy-five years later.

At the first regular meeting January 27, 1857, Doctors Fountain, Witherwax, Carter, and Barrows were elected as delegates to the Iowa State Medical Society meeting at Iowa City the following June, and Doctors Barrows and Saunders were selected as delegates to attend the meeting of the American Medical Association at Nashville, Tennessee.

Brief biographic records are available of a number of the original members which may be interesting. Several of them extended their practice to the time that comes within the memory of members present here tonight.

Dr. E. S. Barrows, the first president, as stated before was the first physician to locate in Scott County in 1836. From a letter written in 1908 by his former student Judge Dr. John F. Dillon, we quote, "Doctor Barrows was a prominent physician and surgeon, having been a surgeon in the United States Army in the Seminole Indian War. He had wonderful skill in diagnosis and was a bold and successful practitioner. He made very little use in his ordinary practice of any other remedies but calomel, blue mass, Dover's powder and compound cathartic pills." Doctor Barrows was elected president of the Iowa State Medical Society in 1859. His death occurred in 1863.

After Doctor Barrows the outstanding pioneer physician of this community was Dr. J. M. Witherwax. He was a graduate of the College of Physicians and Surgeons of New York in 1835. He located in Davenport in 1838, and for thirty years was one of the leading practitioners of the territory. At the Des Moines session of the State Medical Society, February 24, 1870, Dr. William Watson, of Dubuque, spoke a beautiful eulogy of Doctor Witherwax whose death had occurred in June, 1869. He referred to his high professional qualifications and work as a pioneer physician, devotion to the best of medical ideals, election to the presidency of the State Medical Society in 1853, and faithful services as surgeon during the Civil War. His death was due to chronic lead poisoning from the use of a hair restorer containing large amounts of lead acetate. Although he had a flowing white beard and abundant hair on his head, he faithfully rubbed this restorer into his hair daily for several years before his death.

One of the charter members, Dr. C. C. Parry, became distinguished in other fields aside from that of medicine. In the fall of 1846 Dr. Charles Christopher Parry began the practice of medicine in Davenport. He was born in Gloucestershire, England, in 1823, coming to Washington County, New York, at nine years of age. He graduated from Union College, with honors, in 1842, and as a Doctor of Medicine from Columbia College, New York City, in 1846. While keenly interested in medicine he soon discovered that all his natural tastes and instincts led directly away to the blossoming solitudes of nature. The physician was merged in the naturalist, and he was destined to become one of the leading botanists of his period. Beginning the collection of wild flowers about Davenport in 1847, for more than thirty years the greater part of his time was spent in observing and collecting, through central Iowa, along the Mexican border, across the Isthmus to San Diego, to the junction of the Gils and the Colorado rivers, up the coast to Monterey, along the Rio Grande, in the

mountains of Colorado and California, the Alpine Flora of North America, Yellowstone National Park, Utah, and old Mexico. A peak in the Snowy Range is named Mt. Parry. He became the intimate of Professor Asa Gray, and other prominent botanists as Torrey, Sargent, and Engelmann. His collections were referred to as being unequalled in America as to size and value. He was the discoverer of the beautiful blue spruce of our gardens, and many plants bear his name. While contributing largely to various societies at home and abroad, he made for himself one of the finest private herbaria in the land, comprising over 18,000 classified specimens, representing nearly 6,800 species, which was later purchased by the Iowa State Agricultural College at Ames.

These data have been obtained from a biographical sketch of Dr. C. C. Parry by Dr. Charles H. Preston, a former member of this Society in an address presented before the Davenport Academy of Sciences, of which Doctor Parry was charter member, soon after his death in 1890.

In spite of frequent absences from the city the records indicate that Doctor Parry maintained a continued interest in the County Medical Society. The attendance record for the first five years shows that he was present at every regular meeting. As late as 1865 his name appears frequently on important committees. In 1859 he was president of the Society and helped to entertain the State Medical Society which met in Davenport that year.

John M. Adler and E. James Fountain, who were associates in practice, came to Davenport in 1854, after having served together in connection with the construction of the first railroad across the Isthmus of Panama.

Doctor Adler was the secretary of the Society during the years 1859 and 1860, and his choicely worded minutes written in his clear, distinct penmanship will be appreciated as long as these historic records are preserved. In 1864 he served as president of the Society, and one year later he left Davenport and changed his residence to Philadelphia.

Doctor Fountain was a graduate of Nassau Hall, Princeton, in the Arts and in Medicine of the College of Physicians and Surgeons of New York. He is described as attractive in person, agreeable in manners and of refined cultivated tastes, soon gaining the high regard of his professional brethren. He evidently had the investigative instinct, and this led to his untimely death at thirty-four years of age. In the effort to prove that large doses of potassium chlorate had distinct therapeutic value, he experimented upon himself. After taking a half ounce of the drug he rapidly developed an acute gastro-enteritis, suppression of urine, coma and death March 29, 1861. This tragic incident is mentioned in Bartholow's textbook on Materia Medica, edition 1892.

Dr. Thos. J. Saunders, the second president of the Society, is referred to as one of the most scholarly physicians of his period. After graduating in medicine from the University of Pennsylvania in 1843, he studied for two years in the medical centers of Europe, returning to New Jersey for the practice of medicine. Soon afterwards he was elected Secretary of State of New Jersey serving two terms. He came to Davenport in 1855 and became one of the leading practitioners of this city. In 1857 he acted as secretary of the Constitutional Convention, later serving one term as State Senator from Scott County.

Dr. A. S. Maxwell was the first physician in Davenport to limit his practice to diseases of the eye, ear, nose, and throat. He located here in 1855, having been born in 1818. He was first educated as a lawyer, practicing law for a few years, then entered the Hudson Medical College at Cleveland, Ohio, graduating in 1847. For a number of years he carried on post graduate work in his chosen specialty, locating in Davenport in 1855. In 1862 he was elected president of the County Society. From 1862 to 1865 he served as surgeon of the army hospitals at Keokuk, Iowa. While on duty there, he delivered several courses of lectures in physiology at the College of Physicians and Surgeons, Keokuk. Upon his return to Davenport he engaged in general practice, soon being elected City Health Officer, serving as such during the cholera epidemic of 1873. His comprehensive report on this epidemic with its 258 cases from July to September and 85 deaths, was given special recognition by the New York Board of Health and the United States Marine Hospital service at Washington. On account of failing health he moved to California in 1881, where he died in 1884. He was the father of your present member Dr. George B. Maxwell.

The first secretary of the Society, Dr. J. J. Tomson will be remembered by some of the members present, because during the last ten years preceding his death in 1891 he was president of Mercy Hospital Board. His signature will probably be noted on the interne certificates of that period. He was a graduate of Berkshire Medical College and located in Davenport in 1856, the same year that the County Society was organized. He is referred to as a scholarly physician and a public spirited citizen. Doctor Tomson and his wife died on the same day and were buried together.

I am sure some of you will recall the distinguished looking, Dr. John W. H. Baker who remained in active practice nearly to the time of his death in 1905 at the age of eighty-five years. He was a graduate of Dartmouth Medical College in 1842, having Dr. Oliver Wendell Holmes for one of his professors. He served as surgeon in the United States Navy for several years then joined the gold fever rush to California, where he experienced some interesting adventures, locating in Davenport in 1855. He took a prominent interest in medical society affairs, serving as secretary of the county society in 1860-62, its president in 1863, and as president of the Iowa State Medical Society in 1867. He was the presiding officer when the State Society met in Davenport in May, 1867, the subject of his address being, "Is Medicine an Exact Science?" Doctor Baker contributed a

number of interesting articles to the medical literature of his period. In 1868 he presented to the State Society meeting, a very comprehensive survey of Pulmonary Phthisis in Iowa. Two years later before the same society he delivered a paper on Purulent Pleurisy which compares well with the discussions on empyema of today. The Use of Obstetrical Instruments was one of the principal papers on the program of the 1871 session. These publications are all preserved in the Transactions of the Iowa State Medical Society.

He reported to this Society two unusual autopsy examinations, the first being that of Dr. E. J. Fountain who died in 1861 as the result of an overdose of potassium chlorate. I am informed by one of your members, Doctor Strohbehn, that this was reviewed and reported in detail by Doctor Baker at a meeting of the County Society in 1898.

The second bore the title, "Mysterious Death and Autopsy Examination of J. M. Witherwax on June 24, 1869." The clinical history was presented in detail exhibiting a good logical reasoning, permitting a diagnosis before death of chronic lead poisoning due to the long use of a hair restorer. The autopsy examination was very complete, the principal pathological change that was noted was a fatty degeneration of the liver and kidneys. The microscopical and chemical examinations of the different organs were made by Doctors E. H. Hazen, A. W. Cantwell and Lucius French who found evidences of lead in all of them.

Following the original members, interesting new names begin to appear on the roster of the County Society. Dr. James W. McCortney, graduate of the Western Reserve Medical Department in Cleveland, Ohio, in 1853, joined the Society in 1857, and practiced into the time remembered by a number here tonight. In my mind's eye that metal sign still swings to and fro over his office door on Third Street. In 1870 he published a successful lithotomy operation, and in 1875 the operative removal of an ovarian tumor weighing thirty-five pounds.

Dr. James Gamble, of Le Claire, joined the Society in 1857, but had been a practitioner in the county since 1847 and was a worthy example of the pioneer physician. In 1870 he was honored with the presidency of the Iowa State Medical Society.

Dr. Samuel Knox located in Princeton in 1857, and his son Dr. John Knox became associated with him in practice in 1878.

Dr. William A. Hosford joined the Society in 1858, and his name appears frequently in the minutes as a member of important committees. He discontinued practice in 1870 and became engaged in the hardware business. His son, Dr. W. S. Hosford, began the study of medicine, then changed to that of dentistry. Soon after his graduation he became a member of the dental faculty at the State University and was a leading teacher in dentistry for many years, serving also, as dean of the department during the later period.

Dr. Thomas J. Iles is remembered as the cultured physician of the old school, and for the interesting paper presented before the Society in 1870 on the subject, "Parasites as a Cause of Disease and Decay in Man and Plants."

At the October meeting in 1864, Doctor Adler presented Dr. Washington F. Peck for membership, a name that was destined to attain a high place in Iowa medicine, particularly in the field of surgery. He seemed born for leadership, and impressed everyone with his handsome appearance, striking personality and those distinguishing characteristics of indomitable courage and energy, self-reliance, and persistent determination to accomplish his purpose. He served as secretary of your Society in 1864 and 1865 and the careful records in his handwriting add to the historical value of the old minutes. In 1865 he joined the State Medical Society and for twenty-five years his leadership was evident in every forward movement for medical progress in Iowa. His presidential address in 1876, the centennial year, was a remarkable review of the progress of American Medicine in one hundred years.

He early began to develop a sentiment for the establishment of a medical school at the State University. With the helpful association of Judge John F. Dillon and Senator John P. Irish of Iowa City, these hopes were realized and the first session of the Medical Department was held in 1869. Doctor Peck was the first Professor of Surgery and Dean of the Faculty, continuing in both positions until 1891. He was a stimulating teacher and a bold operator. The large number of ovariotomies, about one hundred, was a distinguishing feature of his surgical work. As Chief Surgeon of the Chicago Rock Island and Pacific Railway he soon developed a leadership in that field. Doctor Peck was one of the charter members of the American Surgical Association and an active member of the American Medical Association. His death occurred from aortic disease in December, 1891. An interesting item is noted in the County Society records. In 1878 the first telephone in Davenport was installed connecting the office and residence of Doctor Peck. At the Society meeting on May 2, 1878, it is stated "that the members adjourned early, a part going to the residence of Doctor Peck and the remainder to the office to spend a pleasant hour testing the wonders of this new invention."

Dr. Lucius French, a graduate of the Berkshire Medical College, New Hampshire, came to Davenport in 1865 and became one of the leading general practitioners of the city. No doubt some who are present tonight will remember him.

In 1866 Dr. Thomas Byrnes, of Walcott, entered into membership in this Society. He was a graduate of the Medical Department, Georgetown College, Washington, D. C., in 1865, and represented the highest type of general practitioner as well as the versatile talents frequently associated with the pioneer. During a quarter of a century of country practice he carried on progressive studies in higher mathematics and laboratory experiments in chemistry and physics that attracted the attention of the leading

authorities of that time. He possessed an unusual library in these sciences. It is reported that the County Society occasionally met at his residence in Walcott, and that he entertained the members with his experiments on the physics of sound and other problems in chemistry and mathematics.

Among the early members that contributed to the advancement of medicine in Iowa was Dr. E. H. Hazen, who joined the Society in 1867. After 1869 he spent four successive winters in New York City in preparation for special practice in diseases of the eye, ear, nose and throat, practicing this specialty in Davenport until 1891, when he moved to Des Moines. He was held in high esteem by his fellows, and occupied a prominent place in the profession throughout his career.

In 1868 Doctor French introduced Dr. William Drummond Middleton to the Society which added another real master to the membership. One cannot speak the name of Middleton except in terms of reverent memory, for he is one of the most delightful physicians that Iowa medicine has produced. During thirty-four years of active practice he endeared himself to his colleagues, patients, and friends of this community. He was an inspiration to a generation of students and during thirty-two years the teacher in three subjects, physiology, medicine, and surgery, being perfectly at home in each field. He was a member of the first medical faculty at the State University as Professor of Microscopic Anatomy and Physiology, became Professor of Medicine in 1887 and was appointed to the Chair of Surgery in 1891, continuing as such until his death in 1902, also, serving as dean during the last six years. In 1891 he was honored with the presidency of the State Society and vice president of the American Medical Association in 1901. Aside from his recognized eminence as a physician, words cannot do justice to the charm of his personality, scholarly address, and nobility of character. His keen humor and ready wit added pleasure to every circle in which he moved. He exemplified that impress of character on character as told in the lines, "the touch divine of noble natures gone."

In 1869 two physicians were admitted to this Society who were to add distinction to its membership. Dr. A. W. Cantwell, the father of your present member Dr. John D. Cantwell, was a graduate of the University of Michigan and unusually well prepared in chemistry and the other fundamental sciences. He soon became interested in all sanitary improvements and a prime mover in the promotion of a municipal water supply which has been a continued source of civic pride ever since. His efforts were responsible for the establishment of the State Board of Health in 1880, and he was appointed the first president. He died in 1899.

Dr. Robert J. Farquharson came to Davenport in 1869, entering the office of Doctor Middleton after graduation from two medical schools, the Universities of Nashville and Pennsylvania. He served five years in the United States Navy making a number of cruises to the Orient. Doctor Middleton often referred to him as one of the most scientific and scholarly physicians he had met, and having a wide knowledge of medical literature in several languages. In 1881 he became the first executive secretary of the Iowa State Board of Health which required his removal to Des Moines where he died in 1884.

Another interesting member of the profession of this early period, was Dr. W. W. Grant who came to Davenport in 1871. He was a son of an Alabama physician and a graduate of Long Island Hospital Medical College. He soon gained prominence as a surgeon of ability. In 1883, on April 23d, the first laparotomy for acute appendicitis in Scott County was performed by him. He removed to Denver, Colorado, in 1889 where he still lives. He was chairman of the Section of Surgery of the American Medical Association in 1910, and is recognized as one of the leading American surgeons.

Dr. John H. Kulp, the father of the present member, Dr. Raymond R. Kulp, joined the Society in 1873. Following his graduation from the State University in 1872 he was assistant physician for one year at the Mt. Pleasant Hospital for the Insane. He continued his interest in mental disorders in connection with active general practice, and exerted great influence in establishing a separate pavilion for patients for nervous and mental diseases at Mercy Hospital. An article on the treatment of Nocturnal and Diurnal Epilepsy published in the Medical Record 1875, was considered an important contribution for that period.

Dr. Charles H. Preston became a member in 1873 and is remembered for his interest in the cultural aspects of the practice of medicine. As one of the founders of the Davenport Academy of Sciences he was specially interested in its growth and development. He had a modest, gentle manner that endeared him to his friends.

Dr. John A. De Armond came to Davenport soon after his graduation from the University of Pennsylvania in 1876. He was interested in civic affairs, serving as alderman for several years, and about the turn of the century represented Scott County as state senator for two terms.

It is fitting to refer to several of the earlier German physicians, who while not active in society matters had a leading place among the practitioners of this community, and their patients certainly were devoted to them.

Dr. John J. Olshausen was a graduate of the University of Kiel, Germany, in 1847. Ten years later he located in this city and was in active practice here for twenty years. He officiated at my advent into Davenport and naturally his name brings forth the warmest sentiments.

Dr. Gustave Hoepfner, also a graduate of the University of Kiel (1862), for more than thirty years was the leading physician of the German families of that period.

It is interesting to recall the prominent part taken by several of the earlier homeopathic physicians.

Their medication was confined to rather simple remedies, but it must be admitted they brought much cheer and comfort to the patients entrusted to their care. Mention should be made of the two Doctors Henry Wessel, father and son, who occupied a period of practice of forty years beginning in 1860. Then there were the Doctors P. H. and H. A. Worley, the father a graduate of 1854 and the son in 1873 who practiced in the eastern part of the city, well up to the beginning of this century.

About 1880 the first example of group practice was introduced into this community in the formation of the German Klinik patterned after the Klinik of Germany and other European countries. A small hospital was established in connection with it. The original founders were Dr. Carl Matthey, the father of your president, Doctor Hoepfner, and Doctor Jaenicke. A few years later Dr. Henry Matthey, twin brother of the aforenamed, joined the group. As all the members were graduates of German universities, the methods of practice were, in some respects, in advance of those prevailing in this section. In this Klinik the first demonstration was given of the Lister method of the use of carbolic acid spray in the operating room and in the dressing of wounds.

During the eighties new names appear on the membership roll that had profound influence in determining the practice of scientific medicine in the following thirty years. Of these we recall: Dr. William L. Allen, the finest type of cultured physician; Dr. Richard W. Hill, the skillful surgeon admired by students and colleagues; Dr. J. P. Crawford, a practitioner of the highest standards, and lastly, that great teacher and medical scientist, Dr. Lawrence W. Littig, a graduate of two universities, Iowa and Pennsylvania, and a member of the Royal College of Surgeons of England. Dr. A. W. Elmer and Dr. C. M. Robertson also came during this period limiting their practice to the head specialties. Dr. Henry Braunlich, your honored member, likewise, as physician and surgeon added distinction to your profession. Practically all of them had the advantages of one or more years of post graduate study in the larger medical centers of Europe, and in bringing the flavor of the great masters of their day, Billroth, Lister, Virchow, Rokitansky, Kolisko, Nothnagel, Pasteur, Koch and Charcot, they distinctly advanced the standards of medical practice in this county and state.

In conclusion it seems proper to refer to Davenport in its relation to the development of medical education in Iowa.

The first medical college in the state was established here in 1849 under the name of the College of Physicians and Surgeons of the Upper Mississippi. Dr. John F. Dillon was one of the graduates in 1850. The school remained in Davenport only one year, when it was moved to Keokuk, becoming the Medical Department of the State University, which connection was maintained until 1869 when the department became a part of the University at Iowa City. The present College of Medicine of the University of Iowa had its inception as you know in the membership of your Society. Following the founders, Dillon, Peck, and Middleton, a goodly number of Davenport physicians have held important posts on the teaching faculty. The influence of this association has inspired higher ideals and the desire for further post graduate training, which has been an important factor in keeping your profession in the forefront of scientific medicine.

There come to mind four native sons of Davenport who have gained honor and leadership in medical teaching beyond the borders of our state. I refer to the late Dr. Carl A. Hamann, professor of surgery and dean of the faculty of the Western Reserve University Medical School of Cleveland, Ohio. When he passed from the stage a year ago he was mourned as a great medical leader and one of the foremost teachers of surgery of his period. In this Medical School is another native son, Dr. Carl Wiggers, professor of physiology, one of the leading physiologists in America, and a recognized authority on the physiology of the heart and circulation.

At the Long Island College of Medicine, Brooklyn, New York, there are two brothers on the medical faculty, Dr. Emil Goetsch, professor of surgery, and Dr. Arthur Goetsch, associate professor of surgery. The former is a graduate of the Johns Hopkins University School of Medicine and former associate of Dr. Harvey Cushing at the Harvard University Medical School. He has made important contributions to our knowledge of thyroid disease. His brother, Arthur, was formerly associated with the faculty of the University of Chicago in the department of anatomy.

A new generation of physicians is coming into the membership of your Society. They are trained in a different school with a fuller knowledge of the fundamental sciences and clinical medicine, and are thus better able to fulfill the various demands of medical service now required of the practicing physician. Their problems will be different, but no less difficult to solve than those of the founders of this Society.

You will admit that the medical pioneers we have tried to recall tonight, belong to the elect. They had courage and vision, and it may be said of them, that, "they caught the gleam and followed it."

Such in part is the rich professional heritage that has come to you. May it be the inspiration for the future, and like a guiding star, brighten the pathway of medical progress for tomorrow and the years beyond.

ROY FRANK BELLAIRE, M.D.
1884-1931

An Appreciation

Dr. Roy Frank Bellaire, of Sioux City, died on the eleventh of August of septicemia. Death came after a lingering illness of six months.

Dr. Bellaire was born on the 27th of August, 1884, in Winona, Minnesota. In 1888 he was brought by his family to Le Mars, Iowa. By adoption he was a

grandson of the late Dr. Schwindt, of Le Mars, a man widely known in the early days.

Dr. Bellaire attended the parochial schools of Le Mars following which he entered St. Mary's College in Kansas. After graduating from there he entered the medical department of Saint Louis University, from which he was graduated in 1909. He returned to Le Mars and practiced general medicine until 1917. At this time he moved to Sioux City and entered the specialty of radiology. He interested himself deeply in this branch of medicine and became most proficient, taking post graduate work at Jefferson Medical College, New York Post Graduate School, Johns Hopkins University and Harvard University.



During the World War Doctor Bellaire served in the medical corps of the United States Navy doing duty in the radiological department of the Naval Hospital at Great Lakes. In later years, 1925-26 he was commander of the Monahan Post of the American Legion. In many medical organizations he was an active and honored member. These included the Woodbury County Medical Society, Iowa State Medical Society, American Medical Association, Sioux Valley Medical Society, Iowa Clinical Society and the Radiological Society of North America. He was a staff member of all the Sioux City hospitals.

Dr. Bellaire is immediately survived by his widow, Mary Bellaire, and an only son, Richard Bellaire.

For many years Doctor Bellaire had been the only physician in this city specializing in radiology. For this reason his close medical relations with all the doctors in Sioux City and a large number in the surrounding territory of Iowa, South Dakota and Nebraska were inevitable. Because of his proficiency in his specialty, his high conception of professional ethics, his sincerity and his great personal charm these relations were so dear to those enjoying them that his loss is great beyond words.

Roscoe Jepson, M.D.

IN MEMORIAM*

JOHN COMBER DOOLITTLE, M.D.
(1860-1931)

From time to time, honored members of the Iowa medical profession pass beyond the western horizon into the unknown. The recent passing of Dr. John C. Doolittle has saddened many social, professional, and Masonic friends, yet it came as a deliverance from a long and trying illness. While we will miss him, we rejoice in the release of a gentle soul from an enfeebled body.

Dr. Doolittle was born at Delhi, Delaware County, Iowa, on April 16, 1860. His early life was spent in that vicinity where his preliminary education was acquired. During early manhood, he attended Lenox College. In February, 1888, he received the degree of Doctor of Medicine from Rush Medical College. In 1889, Dr. Doolittle became an assistant physician in the State Hospital for the Insane, at Independence, Iowa. Between the years 1889 and 1905, he advanced from the position of third assistant to first, and was at all times an invaluable state employee.

The services of the physicians in our state hospitals do not lend themselves readily to exaltation or the spectacular, but the commonwealth owes a debt of gratitude to these men for their vigilance, fidelity, and professional solicitude in the care of their public charges. Of this type of physician, Dr. John C. Doolittle was an outstanding example.

It is of interest to note that Dr. Doolittle, during his service at the Independence State Hospital, was professionally associated with Dr. A. M. Barrett, now of the University of Michigan, and Dr. Arthur Hamilton, now of Minneapolis, Minnesota. Dr. Baret is a nationally recognized authority in psychiatry, and Dr. Hamilton is one of the best known neuropsychiatrists in the United States. Great credit is due Dr. Gersham H. Hill, who was then superintendent of the Independence Hospital, for having surrounded himself with medical assistants of such ability. The staff, of which Dr. Doolittle was a member, put Iowa on the psychiatric map.

In 1905, Dr. Doolittle, in conjunction with Dr. Gersham Hill, and others, organized a company which established in Des Moines, The Retreat, a sanitarium for mental invalids. In this phase of professional work, he continued until illness incapacitated him.

In 1907, Dr. Doolittle was honored by being made chairman of the Medical Section of the Iowa State Medical Society.

The man, whom this obituary honors, was a mild, unassuming gentleman, who in a quiet way, made

*Reprinted from Bulletin of The Des Moines Academy of Medicine and Polk County Medical Society, October, 1931.

many friends. He was an ardent Mason, and held numerous offices in the Blue Lodge, and its subsidiary organizations. Although Dr. Doolittle was not a man who forced himself into prominence, he belonged to that great body of professional men who unobtrusively do their bit in order that humanity may be made better.

As we journey ever westward,
And our steps more faltering grow,
May our faces be illumined
By the sunset's ruddy glow.

Where the sun leads let us follow,
As it sinks beyond the rim,
Never fearing that our pathway
Will be toilsome, rough, or dim.

As in youth, so in life's twilight,
Fairer valleys stretch away,
Just across yon purpling hill-crest
May be found Eternal Day.

FRANK A. ELY, M.D.

WILLIAM MOERSHEL, M.D.

An Appreciation

Iowa County Medical Society

With the death of Doctor William Moershel on October 27, 1931, there passed from the fellowship of the Iowa County Medical Society one of its most loyal supporters and an active member in its early organization and history.

For nearly a half century he has been esteemed and respected by a community that will miss him. We extend to the bereaved family our sincere sympathy and for their consolation we recommend the remembrance of his many years of self-sacrificing service to his fellowman, and his nobility of character which will remain a heritage and example to follow.

It is recommended that this tribute of regard for Doctor Moershel from the Iowa County Medical Society be recorded in the minutes, and that a copy be forwarded to his bereaved wife, as well as to the Journal of the Iowa State Medical Society.

Committee—
Dr. Fred Sternagel
Dr. E. L. Hollis
Dr. F. C. Schadt

S.M.A. CELEBRATES TENTH ANNIVERSARY

Ten years ago this month the S.M.A. Corporation, then The Laboratory Products Company, announced an epoch making development, S.M.A., to the medical profession. It represented a new idea, namely that cow's milk could be modified to resemble breast milk so closely that about 95 per cent of the infants deprived of breast milk would do well on it, and that the anti-rachitic factor, cod liver oil, could be included so that no other protection would be necessary.

The idea for this adaptation had been conceived back in 1910, now twenty-one years ago. Clinical tests began in 1913. A preliminary report made to The American Pediatric Society in 1915 and a more extensive and elaborate one in 1918 before the Section on Diseases of Children of the American Medical Association proved that S.M.A. was a marked advance in infant feeding.

UNITED STATES CIVIL SERVICE EXAMINATIONS

The United States Civil Service Commission announces the following-named open competitive examinations:

SENIOR MEDICAL OFFICER

Tuberculosis
Neurology-Psychiatry (either one, or the two combined)
Roentgenology
Bacteriology-Pathology (either one, or the two combined)
Eye, ear, nose and throat (any one, or in any combination)
Orthopedic surgery
Internal medicine and diagnosis
General surgery
Urology
Cardiology

MEDICAL OFFICER
ASSOCIATE MEDICAL OFFICER

Cardiology
Child hygiene
Eye, ear, nose and throat
Genito-urinary (urology)
Internal medicine and diagnosis
Neuropsychiatry
Pathology and bacteriology
Roentgenology
Surgery (general or orthopedic)
Tuberculosis
Venereal disease

Applications for the positions of senior medical officer, medical officer, and associate medical officer must be on file with the U. S. Civil Service Commission at Washington, D. C., not later than December 30, 1931, except that the Commission reserves the right to issue subsequent notice closing the receipt of applications before that date.

The examinations are to fill vacancies in the Veterans' Administration, Public Health Service, Indian Service, Coast and Geodetic Survey, and Panama Canal Zone.

The entrance salary for senior medical officer is $4,600 a year, for medical officer is $3,800 a year, and for associate medical officer is $3,200 a year.

Competitors will not be required to report for examination at any place, but will be rated on their education, training, and experience.

Certain specified education and experience required.

Full information may be obtained from the Secretary of the United States Civil Service Board of Examiners at the post office or customhouse in any city or from the United States Civil Service Commission, Washington, D. C.

THE JOURNAL BOOK SHELF

BOOKS RECEIVED

*AMERICAN PHYSICIANS AND SURGEONS—A Biographical Directory of Practicing Members of the Medical Profession in the United States and Canada—including the leading hospitals, sanitariums and health resorts of both countries.—Prepared by James Clark Fifield, Editor of The American Bar.—The Midwest Company, Minneapolis, 1931. Price, $30.00.

*CRIPPLED CHILDREN—Their Treatment and Orthopedic Nursing.—By Earl D. McBride, B.S., M.D., F.A.C.S., Instructor in Orthopedic Surgery, University of Oklahoma School of Medicine.—C. V. Mosby Company, St. Louis, 1931. Price, $3.50.

*FOOD ALLERGY—Its Manifestations, Diagnosis and Treatment.—With a General Discussion of Bronchial Asthma.—By Albert H. Rowe, M.S., M.D., Lecturer in Medicine in the University of California Medical School, San Francisco.—442 pages.—Lea & Febiger, Philadelphia, 1931.—Price, $5.00.

*FUNDAMENTALS OF DERMATOLOGY—By Alfred Schalek, M.D., Professor of Dermatology and Syphilology, University of Nebraska College of Medicine.—Second Edition, thoroughly revised.—247 pages, with 58 engarvings. Lea & Febiger, Philadelphia, 1931. Price, $3.00.

*HEALTH ON THE FARM AND IN THE VILLAGE—By C.-E. A. Winslow, Dr. P.H., Professor of Public Health, Yale School of Medicine. 281 pages, illustrated. The Macmillan Company, New York, 1931. Price, $1.00.

*AN INTRODUCTION TO GYNECOLOGY—By C. Jeff Miller, M.D., Professor of Gynecology, Tulane University School of Medicine; Chief of the Department of Gynecology of Touro Infirmary; Senior Visiting Surgeon, Charity Hospital, New Orleans.—Illustrated.—C. V. Mosby Company, 1931.—Price, $5.00.

*THE MEDICAL CLINICS OF NORTH AMERICA.—(Issued serially, one number every other month.) —Volume 14, Number 6, and Index Volume.—(New York Number, May, 1931.) —Octavo of 300 pages with 55 illustrations.—Per Clinic Year, July, 1930, to May, 1931.—Paper, $12.00; cloth, $16.00 net.—Philadelphia and London: W. B. Saunders Company, 1931.

USEFUL DRUGS—A List of Drugs Selected to Supply the Demand for a Less Extensive Materia Medica with a Brief Discussion of their Actions, Uses and Dosage.—Prepared under the Direction and Supervision of the Council on Pharmacy and Chemistry of the American Medical Association.—Edited by Robert A. Hatcher, Ph. M., Sc. D., M.D. and Cary Eggleston, M.D.—Eighth Edition.—Published by American Medical Association.

*Review appears in this issue.

BOOK REVIEWS

AMERICAN PHYSICIANS AND SURGEONS

A Biographical Directory of Practicing Members of the Medical Profession in the United States and Canada—including the leading hospitals, sanitariums and health resorts of both countries. Prepared by James Clark Fifield, Editor of The American Bar. The Midwest Company, Minneapolis, 1931. Price, $30.00.

This volume has been prepared for the use of the general public, for doctors, hospitals, public libraries, and insurance companies. It offers a selected list of physicians in all of the larger cities and towns of the United States and Canada. This list has been compiled upon the recommendation of representative physicians in each particular community and also by extensive personal investigation conducted by the author. A typical list covers most of the specialties as well as general practice and general surgery. A short biographical sketch follows the listing of each physician in which is included his specialty, his training, his society affiliations, and his address. Because of the scope of this work, it will be found particularly useful where references are required in a distant city for competent specialists' services.

The arrangement of the book is ideal, since states are listed alphabetically and towns within the state also follow in alphabetical sequence. Preceding each section is an epitome of the descriptive matter contained in the section. In the second part of the volume recommended hospitals are listed, while in the third and last part, health resorts of merit are described.

A survey of the list of physicians offered in towns with which the reviewer is familiar would indicate that the list presented is carefully selected and while it does not include all of the good men in the particular locality, it does not err in including poor ones. This volume deserves a prominent place among directories of the medical profession and will prove most valuable in the field for which it has been written.

CRIPPLED CHILDREN

Their Treatment and Orthopedic Nursing. By Earl D. McBride, B.S., M.D., F.A.C.S., Instructor in Orthopedic Surgery, University of Oklahoma School of Medicine; Attending Orthopedic Surgeon to St. Anthony Hospital, etc. Cloth. Price, $3.50. pp. 280. St. Louis, C. V. Mosby and Co., 1931

This excellent small volume is one with which every nurse should be thoroughly familiar It is clear. It is concise. It does not bore with tiresome detail yet is sufficiently complete. It does not attempt to give the nurse as complete a knowledge of orthopedic surgery as the surgeon, but limits itself to those things which the nurse should know. It presents this information in a manner easily understood and in a form rapidly assimilable in the brief time at her disposal.

V. A. R.

FOOD ALLERGY

Its Manifestations, Diagnosis and Treatment. With a General Discussion of Bronchial Asthma. By Albert H. Rowe, M.S., M.D., Lecturer in Medicine in the University of California Medical School, San Francisco. 442 pages. Lea & Febiger, Philadelphia, 1931. Price, $5.00.

During the past few years much attention has been directed to the subject of allergy as an etiologic agent in many diseased processes, notably eczema, bronchial asthma, certain forms of rhinorrhea, migraine and gastro-intestinal irritability. During the earlier years of the work on this subject, much skepticism was expressed by most clinicians relative to its ultimate value. This attitude was, no doubt, developed due to the difficulty one expressed in explaining the logic of the allergic phenomena. More recently due, no doubt, to the impetus given the work by outstanding investigators, clinical allergy has become a very much discussed and apparently a very important consideration in internal medicine. The seasonal manifestations of allergy in the form of hay fever gave early prominence to the rôle of inhalence in allergic diseases. Only recently has the part played by foods been more accurately studied.

This volume by Dr. Rowe is the first monograph to appear discussing with any degree of completeness this subject of food allergy. Since this book covers in a most thorough fashion our present knowledge on this important subject, it should receive an enthusiastic reception by all physicians dealing with these conditions. Dr. Rowe gives explicit instructions relative to the mode of investigation of allergic management in the clinical testing for food allergy. He explains his diets by recipes adequate for maintaining balance in the food requirements of the body. Throughout the text he exemplifies his discussion by case reports from his own experience. This volume is easily the outstanding text on the subject and one which should be read by every practitioner.

FUNDAMENTALS OF DERMATOLOGY

By Alfred Schalek, M.D., Professor of Dermatology and Syphilology, University of Nebraska College of Medicine. Second Edition, thoroughly revised. 247 pages, with 58 engravings. Lea & Febiger, Philadelphia, 1931. Price, $3.00.

This small volume on dermatology is essentially a compend of the subject and is not intended to take the place of larger texts. It will be found particularly useful to the student who wishes a means of quickly reviewing this branch of medicine or for the physician, who, while not specializing in this branch, occasionally requires a text for ready reference, either from the standpoint of diagnosis or treatment. The book is well illustrated and the descriptions are sufficiently complete to permit one fairly familiar with the subject to readily recognize and classify a dermatologic condition. The volume is of convenient size either for the desk or bag.

AN INTRODUCTION TO GYNECOLOGY

By C. Jeff Miller, M.D., Professor of Gynecology, Tulane University School of Medicine; Chief of the Department of Gynecology of Touro Infirmary; Senior Visiting Surgeon, Charity Hospital, New Orleans. Illustrated. C. V. Mosby Company, St. Louis, 1931. Price, $5.00.

This text on gynecologic anatomy, physiology, symptoms and pathology is intended as an introduction for junior medical students solely. For this reason treatment is omitted as junior students do not treat cases.

Since the junior course in gynecology comprises 16 weeks in most schools, this work is divided into 16 chapters, which allows one chapter to be covered each week.

Each chapter, while very brief and concise, is yet very complete and contains bibliography from the best recognized authorities.

The book is profusely illustrated and very well indexed; and is very practical for the purpose intended. This should be a great help to the junior student who is just beginning his study of gynecology.

F.W.R.

THE MEDICAL CLINICS OF NORTH AMERICA

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In this number, prepared by eminent New York clinicians, a number of very interesting clinics are presented. The first two clinics deal with cardiac lesions, the first discussing mitral stenosis and the second subacute bacterial endocarditis. The clinic by Dr. Miles Sterling, presenting the medical treatment of peptic ulcer will be found unusually helpful, since this presentation covers in detail daily diets for the treatment of this condition. The discussions of rheumatic fever and its complications by Doctors Loeb and Goldring present the newer concepts of this disease and will be of particular interest to the general practitioner. Renal glycosuria is ably discussed by Dr. Ralli. Several clinics are presented which will be of particular interest to the pediatrician, such as gonorrhea in children, acute infections of childhood and pyuria in children.

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DERMATOLOGICAL CLINIC*

JAY F. AUNER, M.D., Des Moines

Mr. President and Gentlemen: I am glad to see such an overwhelming and enthusiastic interest in dermatology this morning, but as a matter of fact I guess that many of the boys are busy in the House of Delegates. That session seems to occur at about the same time as this little clinic of mine.

It is very difficult, as you know, to assemble an ambulant clinic, particularly when your cases are skin cases. It is a peculiar factor in human psychology that individuals are proud of their surgical scars and love to discourse on them, but a skin lesion, however innocent, is considered a reproach.

I say it is a peculiar human trait; we skin men find that our patients have one other peculiarity. Men who are seeing any quantity of dermatologic cases will bear me out in this statement. A patient will come to you with a fracture. Aided by your skill and knowledge you adjust that fracture and get a nice result, and the patient is grateful and pleased. A few years later he breaks the same leg, we will say, and sends for you posthaste because of your surpassing skill in the other instance, saying, "Doctor, I am so glad you are in town. My broken leg *has come back!*"

The same individual comes to the dermatologist with a skin complaint. We will say that we are fortunate enough to recognize the condition and to cure the dermatosis. Fourteen years after that the same individual comes into the office and says, with a look of resignation, 'Doctor, it has come back again!" Irrespective of the condition, these patients must never have a recurrence, once they have been seen and treated for a skin lesion!

We have here a case that is of very great practical interest to you. This case is shown to you through the courtesy of one of my confreres, Dr. David Blum, who has been treating this young matron for about a week or ten days.

The doctor, as usual, has made a very accurate diagnosis. I saw the case with him not so long ago, and I see that he is getting very splendid results from his medication, which, by the way, was not suggested by me. This is interesting because you will often encounter cases like this in general practice. This woman first complained of a severe acute pharyngitis, with pains in her joints. You have probably all made the diagnosis, erythema nodosum. Erythema nodosum is one of the practical entities in dermatology as well as in general medicine. It is due, we think, to the presence and activity of two virulent strains of streptococci; namely, the viridans and the hemolyticus. The focus of infection is almost invariably in the tonsil and paratonsillar tissue, as in this case.

We should have a tongue depressor to see this throat. It tells its own story. The follicles are infected. The patient is much better than she was, but the storm broke first in that locality, and the clinical picture that you see here is the dissemination of toxemia through the blood stream and into the skin, disturbing the normal vasomotor arc and the cells of the rete of the external skin.

In making the diagnosis, we must differentiate erythema nodosum and erythema multiforme. As one of the erythema group or the urticaria group, erythema multiforme is a toxemia from an endogenous toxin, a disturbance of metabolism. Patients with erythema multiforme have a different distribution of the skin lesion. It almost invariably occurs on the face, forehead, arms, forearms and hands, especially the dorsum of the hand. There are nodular lesions here and there in these localities but only one or two on the face. True, we have here a woman who is ill. Yesterday she was very ill; it was with difficulty that she was brought up here this morning. She has had fever.

Dr. Blum: Yesterday her temperature was 100°.

Dr. Auner: And higher a little while before that. That is not typical of the urticaria group. Outside of perhaps a little anorexia and malaise, there are very few systemic symptoms in any of the urticaria group. Furthermore, in erythema

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multiforme, the patient complains of intense itching. The skin is highly sensitized, responding to any irritation in wheals and dermographism. That is not true in cases of erythema nodosum.

The typical distribution of lesions in erythema nodosum is on the anterior aspect of the leg, sometimes on the thigh, and frequently on the arms, particularly the forearm, and infrequently as you see here, on the face.

What do we do for these cases? The common remedy for erythema nodosum, as many of you know, is found in the salicylates. This woman is getting one and one-half drams a day of sodium salicylate. It does not make much difference what you use externally, but these people are very much more comfortable if the affected skin areas are bathed frequently with a combination of 4 per cent boric acid and 12 per cent magnesium sulphate solution in hot water with 2 per cent glycerin.

After they are repeatedly bathed in this solution, made fresh each time, you can add to their comfort by sponging calamine lotion very sparingly over the skin area. My pharmacist makes up this formula for me; I believe it is one-half ounce each of pink powdered calamine and zinc oxide to one pint, and I know it is always never more than 2 per cent glycerin in distilled water; flavored, if you like, with oil of rose, making a rose water. It makes a pleasant lotion and gives these patients great comfort.

The lady is progressing very favorably. Has she ever had any surgery of the tonsils?

Dr. Blum: No. I am trying to urge it, but she will not have it.

Dr. Auner: When she recovers that will probably be suggested to her.

We are grateful to you, Doctor Blum, for your courtesy in this respect.

Are there any questions or any comments?

Dr. Evans: How long does it usually last?

Dr. Auner: That depends on the care and treatment usually, in the neighborhood of a fortnight.

Dr. Evans: How often do cases clear up without treatment?

Dr. Auner: They very often lead to trouble. The streptococcus, especially the hemolyticus, is a bad actor.

Through the courtesy of Dr. Bailey, my confrere in the city, we have here a rather singular anomaly for us to see this morning, what dermatologists recognize as canities, a sharply circumscribed lack of color of the hair. Here we have a girl, a rather pronounced brunette and standing out in the scalp is this tuft of perfectly white hair. We do not understand the etiology of conditions of this kind. They are simply due to a lack of pigment probably because of some interference with the normal nutrition of the hair and the normal deposit of pigment cells in the rete. It belongs in the group of the leukodermas, the vitiligos. As I say, we dermatologists are still in the dark as to the etiology of these cases. We do not know what can be done for them outside of artificial coloring. The vitality of the hair seems to compare favorably with normal hair. It is a condition that does not improve or change with time. I would suggest that the young lady take advantage of the art of the beauty specialist and have these hairs colored. This will require of course persistent and continuous attention along that line, as the hairs grow out, but a young woman with so fortunate an endowment can afford to go to a little trouble.

You know, if we could diagnose all of our skin cases it would help a lot. It is a difficult thing to treat many of the skin cases successfully, but it is probably four times as difficult to recognize them when we see them.

I have here from my private practice a young man who has been kind enough, at my solicitation, to come up and let you see a very persistent case of alopecia areata. Alopecia areata is a name given to a dermatosis affecting all parts of the skin, both hairy and the glabrous, in which the hair loosens in its follicle and falls out, leaving a completely bald area, sharply circumscribed.

While no dermatologist has been able definitely to state the etiology, there are many theories. Perhaps the most promising one is that it is due to some endotoxin, some proteolytic toxin, resulting from a disturbance of metabolism, an interference somewhere of body chemistry, rather than an infection, and that this toxemia, temporarily paralyzes the trophic ganglion that has for its office the distribution in the affected area, so that the cells making up hair-bulb can no longer gather nutrition from the blood stream circulating about them, and the hair dies and falls out.

We know, however, that the vitality of the follicle is not necessarily destroyed, for with proper treatment, and sometimes without any treatment whatsoever, the areas are eventually filled again with normal hair, at first white, with the color gradually returning.

This gentleman was entirely bald in all of these spots that are so nicely showing a hirsute covering now, and I will be glad to tell you the treatment that we are successfully using in this case. Locally there is not much that can be done, perhaps nothing better than the remedy we are using, a mildly antiseptic and stimulating unguent composed of 4 per cent salicylic acid and 12 per cent precipitated sulphur in a yellow vaseline base. The

patient applies this each night at bedtime. We have been giving him the "ultraviolent" ray, as one of my patients called it this morning. By the way, the ultraviolet ray is somewhat of a joke, it is used so extensively, and without rhyme or reason. However, this is one of the two cases where the true ultraviolet ray, used with discrimination and regularity, not more often than once a week, and sufficient to produce good erythema, is really helpful.

For perhaps the past two years, dermatologists have been using an internal treatment that seems sometimes to be brilliantly effective, and that is the intravenous use of sodium thiosulphate. We use graduated doses. We commence with a dose, say, of 500 milligrams in at least 10 c.c.'s of distilled water. You can get these put up in ampules ready for intravenous use every four days, gradually increasing the dose until the individual is getting one gram, 15 grains, of sodium thiosulphate intravenously every four days. As I say, sometimes we are splendidly rewarded with this treatment. This gentleman is making a very excellent recovery as you may note.

We used to think that these were focal infection cases. I have encountered many similar cases, however, where absolutely no focal infection could be found, in the accessory nasal sinuses, in the tonsils or paratonsillar tissue, or in the middle ear.

Here is a very interesting case, gentlemen. I want you to look at this little girl's face and body. It is a case of interest to both the specialist and the general practitioner. You encounter these cases frequently; they masquerade sometimes as infantile eczema. Since the age of three months this little girl has had a dermatosis which has been diagnosed as infantile eczema; she is now a little more than two years old. I think I have had her under treatment for about four weeks. When she came to me she was a sight to behold; she was a solid scab, itching continuously. She slept hardly any, and was the despair of her poor mother.

This is not the so-called metabolic eczema, but what we recognize as *lichen urticatus,* one of the erythema and urticaria group. It is a condition dependent doubtless upon the positive and negative relationship of ion concentration, and it is in this by-play of the ions that calcium is so conspicuously involved. These patients suffer from disturbance of calcium metabolism. When we can raise their blood calcium content they get better, but we have found that it is very difficult to get calcium into these patients and have it retained.

We find that the ordinary dose does little good. But we do find that heroic doses, or such as we used to consider heroic doses are the best means of giving the calcium. This little girl is getting what amounts to almost a level teaspoonful of calcium lactate powder twice daily, early in the morning and at bedtime, always in hot water with a little lemon juice.

These doses will help, but we find that the only way we can mobilize sufficient of this calcium in the blood is by the conjoint exhibition of the parathyroid extract. Therefore, in conjunction with the calcium lactate peroram, we give parathyroid extract subcutaneously. I use Collyp's preparation. This little girl gets three drops every second day, three minims of the parathyroid hormone of Collyp, a Canadian preparation, in conjunction with her calcium lactate. She is showing remarkable improvement. She sleeps at night, and the cutaneous trouble is rapidly disappearing. She is playful, shows interest in her surroundings and is beginning to get a little enjoyment in life. Understand that this baby has been an invalid, suffering from this terrible condition, ever since she was three months of age.

Another thing that we watch in this baby's diet is the protein intake. We give her no raw milk. We prefer to give her a prepared milk of the unsweetened variety. She is getting, I believe, Carnation milk. I am not here to advertise any brand of milk, but "Carnation" is a most excellent canned milk and is given, of course, in dilution; you all know how to use it.

It might be of interest to you to know that about the only local treatment that can make these children comfortable is a combination such as follows: we first bathe them with a 3 per cent thiosulphate of sodium; that is, the commercial sodium hyposulphite crystals, 3 per cent, in warm water, with a soft cloth. Following that they are rinsed with boric acid water, saturate solution, then carefully dried and boric acid ointment is applied. We instruct the mother not to rub the skin with a towel, but to blot it. Then the patient is anointed. We do not rub the salve on. So many people get the idea that the more salve you get on a definite involved area, the more good it is going to do; they put it on like butter on country bread. As a matter of fact, it is the thin film of the medicament that produces the result, so we instruct the attendant to take the ointment in the palms of the hands and anoint the patient, going all over the body rapidly.

We are using for this little girl a preparation that is somewhat similar to the boric acid ointment of the United States Pharmacopia. However, I am not entirely satisfied with that, because it is made up in white petrolatum and the white petrolatum contains too much sulphuric acid. We make up in quantity in our office, for use in these cases, a preparation like this which you will find very

valuable in applications for eczematous infants: boric acid, one part; paraffin, one part; yellow vaseline, eight parts; melted together and stirred continuously, until it cools.

If you will first use the 3 per cent sodium thiosulphate, then the boric acid, then dry the skin and anoint it with this preparation, you will find that you will do all possible for the comfort of these little patients.

I have the opportunity of presenting to you now one of our successful business men in the city, who is my private patient and at my solicitation has been kind enough to appear before you in this clinic.

We have here the cutaneous disorder which you all encounter so frequently, and which masquerades under the appellation "Athlete's Foot." In the south they call it dhobie itch, and they call it everywhere, when they speak accurately, Epidermophyton infection, one of the ringworm family that preys upon the human skin. It is an eczematoid ringworm of the feet which is mildly contagious. The skin is generally infected from damp bathroom floors, especially public baths, such as gymnasiums and clubs. The Trichophyton is the other large branch of invaders accounting for some forms of barber's itch, tinea capitis and tinea circinata. This, however, is not the Trichophyton but the Epidermophyton, a distant relative of the Trichophyton but equally as dangerous a marauder.

This affection has three forms of cutaneous expression. The first is the eczematoid, which first manifests itself in the white, sodden desquamating involvement between the toes and on the soles of the feet. If allowed to go on, it shows up secondarily as a vesicular type, and this often puts the patient out of business, making it impossible for him to walk, or if he gets it on his hands, making it impossible to use his hands. The vesicular type of the Epidermophyton infection is nothing to be trifled with. If allowed to become more chronic, it manifests itself finally on the palms of the hands, and the soles of the feet, in what is known as the keratotic type, or large callosities, yellow in color. This gentleman came to me a week ago Thursday suffering greatly with the usual expression of the vesicular type of this disorder. He is getting along very nicely.

The Epidermophyton infection generally incubates in the sulci between the little toe and the contiguous digit. The infection is usually confined to this locality, and, enjoying the ideal conditions for its growth, warmth, moisture and darkness, it incubates there for a long time, a matter of months, before the individual is aware, from the itching, that he has an infection. Then it shows up as the eczematoid affair that I have described, white, sodden and desquamating.

You gentlemen should really look at this because it is of great importance. I am going to describe a very simple treatment. Shall we use salve? Shall we use ointment? How shall we treat it? We have learned that these fungi are very susceptible to sulphur. Sulphur and fungi of any character do not get along at all. Sulphur is rapidly and permanently destructive of fungi, both the Trichophyton and the Epidermophyton, and many others that I might mention if I had the time.

I have hit upon a simple procedure that cures these cases, which is simply this: Have the patients soak their feet for a continuous period of a half hour each day in a solution containing one-eighth of one per cent liver of sulphur, or potassa sulphurata. They need nothing else; that will cure the infection.

Let me give you a practical way of prescribing it: one dram of liver of sulphur to one gallon of hot water. I have my pharmacist put it up in sealed homeopathic ampules. I might mention that it smells to high heaven, but it cures the infection.

You will find that the palms of this man's hands are infected with the same eczematoid type, or rather the vesicular type. The infection is spread to the hands by fingering the toes. Many people automatically finger their toes when they disrobe at night, especially if their feet have been bothering them a little during the day, and then they forget to use soap and water afterwards. The infection may get into some little abrasion in the skin of the palm, the fungus begins its course and distributes itself in the lymphatic channels of the skin.

I might mention further that these individuals will not only finger their toes and forget to wash, but often they will scratch themselves in the groin or in the axilla. What is the result? Frequently, in susceptible skins, there develops what the old authors used to call the tinea marginatum of the axilla and the tinea cruris on the inner aspect of the thigh.

Member: Will these cases reinfect themselves through the shoes?

Dr. Auner: Yes. I believe it is impossible to sterilize an infected pair of shoes. I have these patients change their hose every day.

Member: Does it extend to the top of the toes?

Dr. Auner: Yes, I merely mentioned where it first gets in its work, where it digs in.

We have a great many treatments, we fellows who are treating these difficult cases all the time, but I am giving you something that is practical. Salves amount to nothing. The duration of the

infection varies; it takes some patients weeks and weeks to get well.

Member: What about the ultraviolet light?

Dr. Auner: The ultraviolet ray is absolutely useless in these cases. The patients may seem to improve, but the improvement is not lasting. The x-ray will help, but I mention that with grave caution.

Here is a young lady whom I am showing because hers was another of the conditions in which the calcium blood chemistry had to be raised. About six weeks ago this young woman came to me literally covered from head to foot with what appeared to be a very serious papulosquamous dermatosis. She was itching violently, her face was swollen and she could not sleep. She had what we used to call a generalized eczema, and she was a very miserable girl. She was not able to continue with her work as a stenographer.

We have been able to bring up her blood chemistry, and I might say in passing that these patients have to be watched carefully. However, if you are careful not to exceed the exhibition of the parathyroid hormone, if you are careful not to give enough to produce the reactionary symptoms of loss of appetite, malaise, fever and headache, and if you watch the patient carefully, you need not fear for the blood condition. These patients should never have mobilized in their blood an amount of calcium in excess of 12 milligrams per 100 c.c., and even less is better.

I present this girl merely to show you the success of this same treatment in young adults. I want to say here that it is acknowledged by a great many of our leading dermatologists that many of the so-called metabolic eczemas, or metabolic dermatoses, are due to an interference with normal metabolism, some disturbance of body chemistry, and are not infections. In all of these cases there is an involvement of the normal calcium metabolism. Generally the patient is hypocalcemic; he does not have enough calcium in the blood for normal metabolism. No doubt this is involved with the ultimate digestion of split protein products which we know poison the body by upsetting the normal vasomotor mechanism of the corium and disturbing and liquefying many of the prickle-cells of the rete mucosum in the outside skin.

You are quite comfortable?

Patient: Yes.

Dr. Auner: Sleep well?

Patient: Yes.

Dr. L. D. Kennedy: Does ultraviolet ray help in these cases?

Dr. Auner: You could not produce enough mobilization of calcium with the ultraviolet light to get good results.

This lady, one of my private patients, has been kind enough to present herself to you. You will all make the diagnosis when you look her over. I have not had her under treatment for the past two years, and she has been perfectly well during that time. I am happy to say that her blood Wassermann is normal.

I present her, not because there is anything unusual in this tertiary case, but because some three or four of the spectacular secondaries I had hoped to present to you today could not come. This lady has been very kind to present herself in order to give me an opportunity to talk for just a moment on the therapy of lues.

I want to make a plea this morning for a little more intense therapeutic assault on the early cases. I think that the fate of a luetic patient is really in the hands of the medical men who see her first. I want to stress the point this morning, gentlemen, that many of us are merely tinkering with lues. Milian of Paris and Harrison of England, both great authorities, declare that the average dose of the arsphenamins is vastly below the effective therapeutic dose. Of course, we must keep in mind that the therapeutic dose is very close to the toxic dose, but we must bring the former up as high as possible to get the best results. With a little plastic surgery, this girl is just about as good as ever, and she is in perfect health.

Milian of Paris has stated that in Uruguay, South America, it is customary to give around 2 grams of neosalvarsan per dose. That makes your hair stand on end! He goes on record as saying that the fatal dose of neosalvarsan is something like 7 grams. So you see how little we have been using against this terrible spirochete invader. Milian, in treating the average man of 60 kilograms, around 150 pounds weight, first gives .3 milligram. The first three doses he gives every third day and sometimes every other day, but further doses are given every week, commencing with .3 and increasing the dose intravenously 150 milligrams per dose until he reaches a maximum of a little over a gram, to be exact, 1.05. He continues that weekly for at least fifteen intravenous injections. Concurrently with this he gives either mercury or bismuth.

You know we have mercury, the old standby, the iodids, sodium-potassium iodid, bismuth, and the newer arsenicals, the arsphenamins, as our armamentarium against invasion of the spirochete. I want to say to you that I do not believe we can afford to treat these cases with the arsenicals alone. Along with Milian and many of the masters in this line, I have learned that the conjoint use of mercury with the arsphenamins is much more effective in the therapy of early lues. The

sooner the diagnosis is made, the better, and the quicker the application of the treatment, the better.

Gentlemen, do not lose sight of the fact that the iodids are a real antisyphilitic. It has been rather a modern fad to wink at the iodids, but so great an authority as Pierce of the Rockefeller foundation has demonstrated beyond a doubt that potassium iodid and sodium iodid are real syphilitic remedies and should be given all during the course of the treatment.

I want to stress another point, that there is no rest period in the proper treatment of syphilis. It is perfectly unreasonable to stop the treatment of syphilis and let the patient rest for six weeks. What kind of a physician, if he were carrying a pneumonia patient along successfully, would say, "Now, I am going fishing for a couple of weeks, and we will let the patient rest." We cannot afford to rest a moment. The spirochete does not rest, and we cannot afford to. These patients must have continuous, intelligent and adequate treatment. But, gentlemen, treat your *patient*. Remember that you are treating Bill Jones, who has syphilis, rather than treating just syphilis. Treat your patient; study him; examine his secretions; examine his urine. Look his skin over carefully. Examine his reflexes; examine his lymphatics; examine his mucous membranes. Watch and treat your patient, but treat him up to the toxic point, watching all the while. If you get into trouble with the arsenicals, you have intravenous sodium thiosulphate that will rapidly neutralize its effects.

Gentlemen, I am presenting this morning two cases of acne. My excuse for presenting so common a condition is the fact that it so frequently is misunderstood and is treated with such difficulty. We do not get very far in general practice in treating acne, and I sometimes think perhaps we do not understand exactly what it is. I have a surprise for you this morning when I tell you that it is becoming the modern consensus of dermatologic opinion that acne is attenuated tuberculosis. The pathology, of course, is in the follicles, but these follicles are breaking down tubercles. Of course, there is a symbiosis of a lot of other infection. We have the so-called acne bacillus, and we have the various strains of the staphylococci, and no doubt other bacteria operating at one and the same time. But do not forget, gentlemen, that your acne patient is frequently tuberculous.

What are we going to do for these people? The etiology suggests that they should be put on a sensible hygienic regimen with a sensible diet, plenty of vitamin C food, much raw food and green vegetables and lots of time outdoors. All foods containing vitamins A, B, C and D are indicated, of course. I think that most of them should have cod-liver oil. If they are given milk, and I will say that most of them are sensitized to milk, it should always be boiled and skimmed and drunk cool or hot as the patient prefers. Do not be satisfied with pasteurized milk for your acne patients.

Dr. E. D. Kennedy: Why?

Dr. Auner: For two reasons, first that we avoid any bovine tuberculosis, and second, the cooking process changes the protein elements of the milk so that the body chemistry can take care of it better. These people have sensitized skins.

I have some interesting things to tell you about the therapy, but we do not have time. This girl is improving wonderfully. She had a terrible case when she came to me. I want to say with regard to the therapy that these patients are getting gold and sodium thiosulphate, and they are getting well.

Through the courtesy of one of our successful Iowa physicians, Dr. Kern, of Waverly, this case has been referred to me for diagnosis. The diagnosis here is between a Paget's disease and a so-called dermatitis of the mammae or eczema of the breast. This girl is unmarried, twenty-seven years of age, and this has been coming and going for over a year. I did not see her until about a half hour ago. There are definite nodules in the breast. There is no adenopathy whatever in the axilla, but I think there is no doubt about the diagnosis of Paget's disease. Paget's disease of the nipple, of course, is a case for surgery and not for the dermatologist. Radium and x-ray have no place in the therapy of these cases. I would advise complete extirpation of the breast in this case.

PREOPERATIVE TREATMENT AND CARE*

CHARLES RYAN, M.D., Des Moines

In our effort to minimize the hazards of surgical procedure, much can be accomplished which will be conducive to the best interests of the patient by establishing in him the highest possible degree of physiologic balance through well-directed and proper preoperative treatment and care.

This particular phase of the subject has not received the universal attention it deserves. Granting the fact that the ordinary young or middle-aged adult with an uncomplicated surgical condition does not of absolute necessity require an

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elaborate preparation to survive surgical interference, the fact remains that quite a large percentage of surgical risks are not included in such a category.

It is well recognized that the age of fifty, broadly speaking, "marks the dead-line in surgical practice"[1] because of the degenerative changes which take place in the parenchyma of vital organs as well as an unbalance in the water and chemical constituents of the body fluids and tissues. It is also common knowledge that the same problems confront us in the patient of any age in whom complicating conditions exist which are more or less independent of the surgical lesion *per se*.

Experience has proven that the operation itself forms but one link in the chain of desired results; also that the most skillful operative technic will at times be embarrassed by undesired complications or fatal results following poorly directed preoperative and postoperative management. The final outcome is the sole responsibility of the attending surgeon and in facing this fact, it becomes his duty personally to direct and supervise all measures that will best fortify his patient for the operation. This service, rendered by a clinician of experience and broad observation, will be reflected in a minimized morbidity and reduced mortality.

It is not our purpose at this time to discuss preparation of the acute emergency case which demands prompt and effective action, except to state that in many cases of this type, with limited time at our disposal, blood transfusions or the intravenous or subcutaneous administration of salt solution, glucose, or other supportive measures can be carried out while preparations are being made or during the operation itself, which may in many cases turn the tide toward a favorable outcome. In this connection I wish to refer to two recent observations that are most interesting.

The first is a report of J. E. Summers[2] in which he advocates the use of Normet Solution as an emergency substitute for blood transfusions with most striking and satisfactory results, especially effective in cases of serious hemorrhage and shock. This is a citrate solution which can be kept in stock and quickly dissolved in the proper amount of normal salt solution and administered without delay, by the usual intravenous technic. Dr. Summers reports nineteen cases with most gratifying results.

The second is one from the Bartlett Clinic in St. Louis[1] concerning certain types of neglected cases of intestinal obstruction in which a history of repeated attacks of constipation and incomplete obstruction is obtained, the patient stating that at times he has experienced difficulty in getting the bowels to move, but has had no attack as severe as the present one. With such a history as a background the following conservative treatment is temporarily employed in an effort to convert this acute condition into a subacute or chronic one: (1) repeated stomach lavage or continuous gastric syphonage by the Levine tube, (2) intravenous administration of equal parts of 10 per cent glucose and normal salt solution, at the rate of 200 c.c. per hour, (3) sufficient morphin and atropin to maintain the respiration about 14 per minute, and (4) the application of large hot packs to the distended abdomen. After twenty-four hours of this regimen, if the condition is not markedly relieved by one or more copious liquid stools and the passing of much flatus, with relief of distention, high jejunostomy is done under local anesthesia. This treatment proves successful in a high percentage of cases of this type and offers an opportunity for determining the exact point of obstruction by a more thorough examination as well as the time necessary for preparation for the deferred radical operation. The high mortality experienced following immediate radical operation in this type of neglected cases of acute intestinal obstruction is markedly reduced by the management outlined.

Leaving these more or less urgent conditions, we will direct our attention to the preoperative treatment and care of the chronic or elective case which offers ample time for thorough study and preparation. Our objective is to establish the highest degree possible of physiologic balance before subjecting the patient to surgical intervention.

Physiologic imbalance is the result of disturbed bodily functions and obviously thorough preparation demands the best knowledge obtainable of the cardiovascular, respiratory, alimentary, genitourinary and nervous systems as well as the general bodily metabolism itself. Any complication revealed should have the benefit of well-directed treatment toward its correction before operation. Adequate preparation, then, includes preparing the patient mentally as well as physically.

The right mental attitude of the candidate who is to undergo surgical experience is most helpful in attaining the best results. The psychologic status of the patient is effected by what is said or done by everyone with whom he comes in contact after the condition demanding surgical treatment has been made known to him. Therefore, the mental phase of preparation begins with his first consultation and examination and much depends upon how the physician says what he has to say to the patient. To attain the ideal is impossible, but in so far as possible, everyone inter-

ested in the outcome should enlist himself in the team "to play the patient's game"[3] by exalting his ideas of safety and surrounding him with an atmosphere of encouragement, cheerfulness and comfort, and maintaining this attitude during the interim of preparation, operation, and the post-operative career as well.

The clinical entity of psychical shock resulting from disturbed emotional stimulation and reaction is well recognized. Consequently an anxious, apprehensive and markedly worried patient who, because of a poor mental attitude, has spent sleepless nights, is a more or less subnormal surgical risk.

To the majority of patients this is an entirely new experience. They are entering upon an adventure the contemplation of which is not at all pleasant. To be operated upon is a most informative experience particularly to the doctor or nurse as those of us who wear the scars know. The patient, therefore, should receive our earnest sympathy and guidance.

Preparation from a physical viewpoint presupposes a careful history and thorough examination. The evidence thus gained and evaluated points the way in which we can best direct our efforts to assist nature in attaining the best results.

Physiologic imbalance includes also disturbances in the water and chemical balance of the fluids and tissues of the body and, as we know, water balance is disturbed by either an increased output or a decreased intake of fluids. Increased output occurs as the result of excessive elimination, as in vomiting, purging or diarrhea, profuse perspiration, polyuria, or diabetes. Decreased intake occurs in all obstructive conditions of the alimentary tract, unconsciousness and other mental conditions. When this disturbance in water balance exists, definite complex changes also occur in the physiologic chemistry of the body as shown by Hayden and Orr in their experimental and clinical work in intestinal obstruction. They have demonstrated that with a lowering of blood chlorids and a raising of carbon dioxid, we have a condition of alkalosis, while with a raising of blood chlorids and a fall in carbon dioxid, the condition is acidosis. The presence of these conditions in marked degree demands attention before surgical treatment is attempted.

The treatment for correction of an existing water and chemical imbalance is the replacement of these important constituents by the administration of water, sodium chlorid, glucose and so forth, in proper amounts by mouth, bowel, subcutaneously or intravenously as indicated.

Adequate time for rest and preparatory treatment is best assured by having the patient enter the hospital not less than eighteen hours before the scheduled operation, or better yet, two or three days in advance. This added time for study offers an opportunity for the recognition and treatment of any unexpected acute conditions arising, such as acute colds and bronchitis, which may chagrin the surgeon when recognized soon after the operation has been performed.

The personnel of the hospital should receive the patient in a most cordial and pleasant manner and impress him with the fact that everyone is interested in his welfare and endeavor to surround him with an atmosphere of quiet, comfort and encouragement.

The usual plan of preparation in the ordinary case is as follows: if a cathartic is necessary it should be mild in character and given two nights before the operation with a cleansing enema in the morning, to be followed by proctoclysis. Fluids are forced by mouth, a high carbohydrate diet given, nonputrefactive in character, with hypodermoclysis in dehydration. Complications having received attention and treatment, and the mental and physical condition being satisfactory. the preparation is completed by insuring the patient a good night's sleep, with a hypnotic if necessary, the evening before operation. The patient is not to be disturbed by the routine nursing care but must be allowed to sleep as late as possible in the morning, and awakened only in time for final local preparation, after which a narcotic is given if indicated. All visitors being excluded from the darkened room, he is allowed to remain quiet until the appointed time, when he is lifted carefully upon the cart and transported to the operating pavilion with the minimum amount of noise and manipulation. He is then transferred to the operating table and anesthesia started. The choice of anesthetic is very important. It is decided upon by the anesthetist and the attending surgeon only after careful consideration of both the mental and physical condition of the patient. Their decision, after weighing these two important factors, should be based upon the philosophy of fitting the anesthetic to the patient rather than fitting the patient to the anesthetic.

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POSTOPERATIVE CARE*

J. P. Cogley, M.D., Council Bluffs

How many times, doctors, in your medical lifetime, have you seen a surgeon emerge from the operating room, shed his gown and gloves and remark to an assistant or relative of the patient, "I have done everything humanly possible for the patient; the rest remains in the hands of Nature, or Divine Providence." I am sure that most of you will agree with me when I say that such a statement cannot possibly be born in a true surgical mind, and fortunately for the patient, in most instances, the surgeon making the remark does not wish to be taken literally in this respect. It is not my intention to speak lightly of the influence cast upon a surgical outcome by factors superhuman and beyond our understanding, but I am sure you agree that most often the opening gun of a vital surgical battle is fired with the closing of the surgical wound.

At this point I venture to suggest that in my opinion the one outstanding factor in postoperative care is the frequency of the visits of the operating surgeon. To my mind the man who operates and then relegates the postoperative care to an interne or a nurse is not only doing the patient a grave injustice by avoiding his obligation as supreme counsellor but is also subjecting himself to just criticism from relatives and friends of the patient. I might add that two of the finest surgeons it has been my experience to observe, have been to my mind guilty of this surgical sin.

I have been accused on several occasions by one of my colleagues, a clear-thinking, forcible physician and an excellent operator, of seeing my surgical patients too frequently. His argument has been that frequent visits to a critically ill patient serve to frighten and alarm him. This argument I emphatically deny and assure you that I feel that nothing but good has come of such a policy. To be sure one should not let the patient be conscious of any uneasiness that is in one's mind concerning the eventual outcome of the case. I see every surgical patient who is ill twice daily and more often if there is any reason for it. I firmly believe that no one is better qualified to detect a deviation from normal convalesence than the operating surgeon. When you close an abdomen, for instance, you meditate on the difficulties of that particular operation, the cecum difficult to invert, the cystic duct difficult to ligate, the oozing between the layers of the broad ligament, the thin rough spot on the sigmoid where you dissected it free from a pyosalpinx; and you, and you alone, understand and are on the lookout for the reasonable surgical complications that may arise out of these technical difficulties. If you are not present at least once daily you will not be able to detect abnormal signs in time to be of surgical help.

I find it exceedingly difficult to think of postoperative care without thinking of the important part played by preoperative preparation. More and more are we realizing that postoperative complications and sequelae are reduced to a minimum by adequate and careful preoperative preparation. We have listened to and enjoyed very much Dr. Ryan's excellent presentation of preoperative preparation of the patient. I am sure that if these procedures are adhered to more stringently there will be less postoperative sadness and worry.

There is so much to be said of both routine postoperative care and the treatment of complications, that time does not permit me to dwell on them at any great length. I do wish, however, to emphasize some points that we consider essential in routine care and also to say a few words concerning some of the more serious complications that have caused us anxiety and apprehension. The majority by far of our surgery is of the abdominal variety, but for the most part the principles of postoperative care apply to other types, of the extremities, thorax, neck, head, and so forth.

ROUTINE TREATMENT

A good many of the routine measures mentioned may seem elementary, but experience has shown us that failure to observe them has often resulted in serious sequelae or at least in marked discomfort and increased period of hospitalizaton for the patient.

After the operation:

1. The patient must be thoroughly dried. A pneumonia jacket should be applied if the weather is cold.

2. All excess iodin should be removed. We have seen some painful infected burns from failure to observe this simple procedure.

3. An abdominal binder should be applied before the patient is moved from the operating room. This is an added precaution, since adhesive tape often loosens up when put on a moist skin. It should be applied so as to make a solid band. Do not piece, space or splice.

4. The patient should be transported carefully to his room, avoiding unnecessary rough handling.

5. The room should be darkened and quiet, and the bed artificially warmed. If a private room is not available, isolation should be approximated by a screen.

6. Morphin for pain or other sedatives for restlessness should be given to secure physical and mental rest.

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7. Visitors who often cause us more trouble than the patient, should be excluded as much as possible. I find it of value to let some near relative, who is calm and collected, see the patient when he arouses and assure him that the operative procedure terminated in a satisfactory manner. The operating surgeon should also reassure the patient as soon as possible.

8. As to position, recumbency is urged while the patient is arousing. When awake, turning him from side to side is a decided advantage, since it maintains a better circulation and to a certain extent avoids circulatory disturbances such as thrombosis and embolism. Pulmonary complications are also less apt to ensue. Elevating the head of the bed is an advantage; it confines toxic products to the pelvis, promotes drainage and in common with frequent turning, is an added comfort to the patient.

9. The question of fluid intake is one of importance. As soon as the patient is fully aroused he is given small amounts of hot water or tea with glucose, tap water in twenty-four hours and a liquid diet in forty-eight hours if his stomach permits. If the patient is in need of fluids or glucose, we give 1000 c.c. of normal saline solution subcutaneously with 50 c.c. of 50 per cent glucose. Some have reported poor results (slough or irritation) from injecting glucose subcutaneously. We have had no trouble with subcutaneous salt and glucose if the glucose is thoroughly mixed and continually agitated during administration. In cases without peritoneal irritation, proctoclysis with 10 per cent glucose is given but we have had considerable trouble with gas pains and nausea in giving proctoclysis to patients with peritonitis and have discontinued its use in these cases.

10. Oral sepsis is an important measure. Frequent rinsing of the mouth with a mild alkaline solution is of extreme benefit to the patient from the standpoint of diminishing oral and consequent pulmonary infection. Cooling solutions are also of great comfort to the patient by allaying thirst and neutralizing objectionable tastes.

11. It has been my experience that the surgeon's most grateful patient is the one relieved of the intense nerve-racking pain of a distended bladder. We believe, however, that postoperative catheterization should be done only as occasion demands, and then before distention has become too great. In cases in which extensive vaginal or pelvic work has been done we believe it an excellent procedure to use a mushroom catheter and release every six to eight hours for the first three to four days. Frequent irrigation with boric is used. It is needless to emphasize the importance of strict antisepsis in these cases. Nothing can cause more harmful effects than catheterization improperly done.

12. We are firmly convinced that the less postoperative attention paid to the bowel in serious abdominal cases, the better for the patient. There can be no question that the use of calomel, castor oil or salts has no place in postoperative abdominal convalescence. A colon tube should be used freely for the first forty-eight hours, and after that an enema may be given. We frequently let patients without marked distention go ninety-six hours without evacuation. A retention enema of eight ounces of olive oil is given to patients with rectal impaction. Ordinarily Petrolagar is started on the third postoperative day.

The questions of removal of suture, sitting up and getting out of bed, and so forth, concern each individual case and we will not deal with them at this time. I venture, however, to suggest that patients be allowed to get out of bed as early as is consistent with their convalescence. As soon as possible the patient should be made to understand that the pathologic condition that brought him to surgery is corrected, if it is, and that he is no longer an invalid in any sense. I feel that the surgeon should take time during the first few postoperative days to assure the patient that his condition is perfectly satisfactory. Tell him why he has abdominal distress, gas pains, and so forth, and before he leaves the hospital tell him again exactly what you have done and why it was necessary. How many times in examining a patient with an abdominal scar and asking him what was done, have you had him say, "I don't know, Dr. So and So failed to tell me." Also before leaving the hospital, the patient should be given explicit orders as to bowel care, diet, activities, abdominal support, and so forth.

These are some of the routine measures that have proved of value in hastening convalescence, adding to the comfort of the patient, and keeping postoperative complications at a minimum.

Many conditions arise that need special care. Try and treat the simplest case as if it were serious and your percentage of complications will decrease. Remember the use of diathermy in the elderly and in those cases in which we fear pneumonia; insulin in the diabetic; ultra-violet radiation in the emaciated and debilitated, in tuberculosis and in chronic infections.

The main point I wish to emphasize is to follow each case carefully, treating it as if it were to have any number of complications; anticipate complications if you can. If in spite of all precautions they do arise, see your patient often enough so that you realize that he has a complication.

In spite of our constant vigilance and careful

preoperative preparation and often because of circumstances over which we have no control, postoperative complications of varying degrees of severity occur. Time does not permit me to elaborate on all of these complications so I mention four that in my opinion cause not only the greatest discomfort and suffering to the patient but increase his hospitalization period materially. Incidentally these same complications are responsible for the greatest share of our postoperative mortality.

Wound Infection. In spite of our continued efforts and vigilance, surgical wounds occasionally become postoperatively infected. Such infections have of late become less common than formerly, due to more careful closure of abdominal wounds, greater asepsis and better control of bleeders in the abdominal wall. The practice of culdesac and stab drainage in infected cases has also contributed to this decrease. Wound infection may be of two types:

1. A spread of the infection present before the operation.
2. A new infection.

This new infection may be focal or may be due to contamination at the time of the first dressing. This is commonly seen in individuals with a lowered resistance. The puncturing of a vessel in the abdominal wall while closing the wound, with resultant hematoma, also favors wound infection. The wound infection may remain localized or give rise to serious generalized symptoms. The infection, with resultant symptoms, generally makes its appearance in from five to ten days after operation.

Treatment: The treatment is primarily prophylactic.

1. Whenever possible drainage should be through the culdesac or through a stab wound.
2. Avoid injury to vessels and undue manipulation in closing the abdominal wound.

If the process has become established, sutures should be removed to insure free drainage. Often the removal of one or two sutures will suffice or they may all have to be removed. The important point is to get adequate drainage.

Following the removal of sutures, gentle irrigation, hot moist packs, and frequent changing of dressings are indicated. In those cases in which the infection is very extensive, it may be necessary to follow the Carrel-Dakin regimen. The wound may be allowed to close by granulation, but hospitalization may be shortened by secondary closure.

Peritonitis. In spite of the recent splendid strides of modern surgery, peritonitis remains the bête noir of the abdominal surgeon. It stands first as the postoperative cause of death in abdominal surgery and all indications are that it will so remain. The infection may be localized or diffused. It may have been present at the time of the abdominal section, or it may occur as the result of operative contamination. This latter catastrophe fortunately occurs but seldom in these times of strict surgical antisepsis.

The treatment of peritonitis, needless to say, is chiefly prophylactic. Unfortunately very little can be done to subdue the conflagration when once it is definitely established. We feel, however, that we have been able to reduce our postoperative peritonitis mortality considerably, or at least have prevented a great number of cases of localized peritonitis from becoming diffuse, by strict adherence to a few simple, well established rules.

1. Drain the culdesac rather than the abdomen wherever possible.
2. Drain a localized abscess whenever possible without unnecessary disturbance of surrounding tissues or removal of diseased viscus (example: in appendiceal abscess with localized peritonitis). The primary operation should be limited to the procedure necessary to provide adequate dependent drainage. The Ochsner or Olonzo-Clark treatment may then be instituted and the major surgical procedure withheld until the storm abates.
3. Do not reopen a surgical wound in the presence of an extensive violent peritonitis without definite evidence of localization. There may be many who will disagree with this latter statement but it is my opinion that it is sound. The treatment of a diffuse peritonitis is at times most discouraging, but it should not be looked upon as hopeless.
4. Fowler's position should be maintained. Ice bags applied to the abdomen, and morphin given for physiologic effect. Food and water by mouth should be withheld.
5. A duodenal tube may be inserted through the nares and allowed to remain in position in the stomach or duodenum. This will prevent retching and emesis and gastric dilatation and serve to remove toxins from the upper digestive tract.
6. A colon tube may be used as necessary.
7. Cathartics of all kinds should be withheld.
8. It has been a more or less established custom in these cases to use continuous proctoclysis. We believe that this procedure is conducive to excitation of peristalsis and peritoneal irritation and have abandoned its use. Since that time the patients have been more quiet, and suffer less from abdominal pain. We substitute 2 to 4 liters of saline with 25 to 50 gms. of glucose each twenty-four hour period, given by hypodermocylsis. Both saline and glucose with or without insulin may be administered intravenously according to the indi-

vidual preference. In diffuse peritonitis nature demands rest for the bowel and our every effort should be expended toward this end.

There has been some attempt of late to revive interest in the procedure of lymphaticostomy in desperate cases of septic peritonitis. This operation was first advocated by Dr. W. A. Costain of Toronto. I have never performed it personally, but one of my colleagues has and in a personal communication has reported that in four cases it has been of no definite advantage to him. It can be done under local anesthesia, involves very little risk and may be worthy of consideration in those desperate cases for which it has been recommended.

Shock. In spite of our efforts to guard against it, we frequently find ourselves face to face with a severe case of surgical shock. This may occur during the terminal stages of the operation, or it may be delayed shock, appearing several hours after the patient has been returned to bed. In cases coming on later than six to eight hours postoperative one should be on guard for a secondary hemorrhage.

We will not take time here to go into the various theories as to the cause of shock. Numerous hypotheses have been advanced and the only principle that we are sure of is that there is a deficiency in volume of blood in actual circulation. This may occur without actual loss of blood from the body and necessitates a belief in the delicate balance that exists between the amount of blood in the capillaries and that in the rest of the circulatory system. Naturally enough, with the exact cause of shock somewhat in doubt a part of our treatment is apt to be empiric.

We but mention briefly that we see it most usually after a long operation or one in which there has been a great loss of blood, after abdominal sections in which there is great absorption of toxins, and in septic peritonitis; also in cases in which there has been excessive manipulation of viscera or tugging on the mesentery of the gut.

Treatment: The prophylactic postoperative treatment consists of the restoration of body fluids that have been lost, maintenance of body heat, the avoidance of excitement and the control of pain.

Active treatment: It is imperative, when we see a case of supposedly postoperative shock, to ascertain that we are not dealing with a case of secondary hemorrhage. The vigorous methods used in combating shock would serve to aggravate bleeding. The differentiation is usually not extremely difficult. After shock is once established the situation is desperate and must be combated with desperate means. The first principle of active treatment is to restore the total volume of blood to the circulation whether it has actually been lost from the body or from bleeding into the patient's own capillary bed. In severe cases whole blood, of course, is the only solution that will remain in the circulation long enough to be of any avail.

Saline solution, or artificial sera such as Locke's solution and Ringer's solution, pass into the tissue spaces almost as fast as they are put in, and are therefore of only transitory value. Next to blood, sugar solutions are the most efficacious. We use 10 per cent glucose without insulin. Insulin reduces the amount of sugar and promotes diuresis, neither of which is desirable.

We believe that hypodermoclysis is contraindicated. It increases the tissue edema and promotes loss of fluids from tissues. There is considerable controversy at this time concerning the use of Acacia and gum saline solutions. Some observers report a marked toxic reaction. We feel that very soon a suitable substitute for blood will be developed by the various workers, and while giving due credit to these pioneers, we hesitate to recommend their results at this time.

Heat: The maintenance of body heat is also an important factor in the treatment of shock. This may be supplied by the usual methods of hot water bottles, electric pads, hot drinks and diathermy. Crile has recently pointed out that by the application of diathermy, using the electrodes so as to concentrate heat in and over the liver and the great vessels of the abdomen, we have an emergency measure for a patient whose energies are flagging, which is almost as effective as blood transfusion for temporary relief.

Other measures: For some time it has been our habit in cases of shock to elevate the foot of the bed, bandage the extremities and apply sand bags to the abdomen. We routinely use a rapid Murphy drip of coffee and brandy to which is added two ounces of adrenalin. Drugs for the most part seem to exert no beneficial influence on shock, although we frequently use morphin, pituitrin, atropin, caffeine and camphor in oil.

Intestinal Obstruction. I can think of no one place in surgery where as much progress has been made in recent years as in dealing with intestinal obstruction. Formerly we were very pessimistic about these cases and while contemplating the hopelessness of the situation, watched the patient pass into a fatal alkalosis. In the light of our present knowledge, however, we now approach these cases with a comforting sense of hopefulness and assurance. The hypertonic chlorid solution, duodenal tube, spinal block, and enteros-

tomy have become a haven for the shipwrecked patient until his natural defense mechanism can guide him to safety.

Prevention of Dehydration: This is one of the most important postoperative procedures, particularly in cases of postoperative ileus in which there has been much vomiting, with great loss of fluids. In these cases there is generally a diminution of chlorids, with alkalosis, and hypertonic saline in large quantities is the solution indicated. Sodium bicarbonate should not be used. It might be well at this point to call attention to the routine use of blood chemistry tests in these cases. They are very helpful in determining the presence of acidosis (in which case insulin, glucose and soda are to be used) or of alkalosis, calling for hypertonic sodium chlorid.

The duodenal tube, passed either through the nose or mouth and held in place by several adhesive strips, is of the greatest help if used at the very beginning. It promotes continuous drainage of the toxic peptones from the upper digestive tract and is an aid in the administration of fluids. It causes the patient no distress even if allowed to remain for several days. In doubtful cases it may be inserted while the patient is on the operating table.

Enterostomy: If we fail to get early and prompt results from the procedures outlined, enterostomy is definitely indicated, and this should be done very early without waiting for the patient's condition to become critical. I might mention here that it has been our custom to perform a jejunostomy on all patients in whom we anticipate the necessity at the time of the original operation. If its need is not evident at that time and becomes an emergency at a later date, it may very easily be performed in the patient's room under local or spinal anesthesia.

I am in favor of spinal block in these cases. It has been called to our attention in the literature and I have had the pleasure of seeing on two occasions, once in a case of my own and again in a case of one of my colleagues, complete release of the ileus and the passage of terrific amounts of gas per rectum, fifteen and thirty minutes, respectively, after the completion of the spinal injection. Neither of these patients had a return of symptoms.

I believe that one should wait at least an hour after injection before performing the enterostomy. After the operation the tube serves as a means of maintaining body fluids. I wish also to call attention to the careful, gentle and frequent irrigation of this tube to prevent plugging and backing up of the toxic material in the upper digestive tract.

Discussion

Dr. Donald Macrae, Council Bluffs: As I listened to these papers I was impressed with the fact that perhaps if we followed these teachings and prepared and treated the patients properly they would not need surgery at all. I think a symposium of this kind should be like a sandwich. I think the question of surgical technic and judgment should be considered between the discussions of preparation and after-treatment. All those things enter into the problem.

Dr. Cogley spoke of peritonitis and drainage of the upper intestinal tract which, as most of you know, is my pet. I think when we start anticipating the dangers of peritonitis, we attempt to bring out the fact that peritonitis is the terminus for nearly all patients who die of some abdominal condition after operation.

Those of you who have been doing high enterostomies, (and I was glad that Dr. Ryan spoke of our friend Bartlett starting this procedure because so many have fought it in the past, and it is now coming into its own) in the postoperative cases of so-called peritonitis, in which general peritonitis has been present, have transformed the patient into a well patient by doing an enterostomy. Had no enterostomy been done, the cause of death would have been recorded as peritonitis. The death would not be due to peritonitis primarily, but to absorptions from the intestinal tract, as Bonney has shown. The fluids in the intestinal tract obstruction are all in the upper part of the small intestine. Regardless of the statement of our friend Orr of Kansas City or of Hayden, who says dogs all die after high enterostomies (we have sort of changed their minds, too, because we find from veterinary organizations that a dog will die but the human being will not die as the result of high enterostomy)—I want to make a plea here for high enterostomies in so-called peritonitis. You will be surprised to see the number of peritonitis patients who recover after high enterostomy. The high death rate from peritonitis is overestimated. Perhaps 25 per cent of these deaths are from peritonitis and 75 per cent are due to absorption of toxins in the upper intestinal tract, proof of which we can demonstrate frequently by the release of these poisons in the presence of general peritonitis and the recovery of the patient.

Dr. S. A. Spilman, Ottumwa: I think these are two of the most important papers that we possibly could have had. All of you who do any surgery will recognize that preoperative care is most important, and not the least part of this is the mental condition of the patient. I should hate to operate upon a patient who thought he was going to die. If you can get him into a mental condition in which he is hopeful, you have done a big part.

I agree with the last speaker on the question of

general peritonitis. I have seen comparatively few cases that I thought were general peritonitis. If I did, I gave them lots of morphin.

I think that these papers should be discussed.

Dr. William Jepson, Sioux City: I am led to address you with respect to the first paper that was read. I think it is an exceedingly important one for us to keep in mind, owing to the fact that the practice of medicine has changed greatly in the last forty years.

At the time that I and many others in this gathering took up the practice of medicine, we were charged largely with the duty of taking care of acute infectious disease, as well as surgical traumas. Since that time the span of life has increased from an average of forty to sixty years, which leads to the following situation: of the 25,000 people who die annually in our state, if we exclude from that number the 10 per cent who die within the first year, we find that by the time humanity has reached the age of fifty, only 7,500 have died, or hardly one-third of the human family, leaving 15,500 at the age of fifty. In other words, over two-thirds of the inhabitants live to be past the age of fifty.

At the age of sixty we have 11,000 dying, or rather there are 11,000 living; at the age of seventy, 8,000. In other words, there are 8,000 who die after they are seventy years of age. There are 3,500 after eighty, and 900 live to be over ninety years of age, and 120 to be over one hundred. Those are the statistics for our state. Heart disease claims 15 per cent of the patients dying; disease of the blood vessels and brain in consequence of rupture of blood vessels, 11 per cent; disease of the kidney, 9 per cent. That means we have a total of 35 per cent of all deaths due to those degenerative diseases. If we extend them over to that period in life when they occur, namely after fifty, that means that two-thirds of all the patients, speaking on the average now, who undergo an operation after fifty may be looked upon as having one or another of these degenerative changes inaugurated. Dr. Ryan very clearly and properly pointed out that up to forty or fifty years of age, patients ordinarily are not a marked surgical risk, but after fifty they are. It behooves us to look carefully into the matter of patients after that age as to what degenerative changes they may have had. They do not necessarily die of the operation but often because of the fact that we have overlooked these degenerative changes.

I do not know whether I dare digress slightly from the two papers presented, but we have had another paper presented, the address on medicine. It was a most valuable paper for us to consider. It has pointed out that cancer of the stomach is on the increase. Gentlemen, all cancers are on the increase and that of the stomach in common with the rest. Why? Because we live over into the cancer age. A large proportion of the people already mentioned, who live to be past the age of forty and fifty, by reason of their tendency to senility, are predisposed to malignancy.

THE USE OF PITUITRIN IN INCOMPLETE ABORTION

ARTHUR L. NIELSON, M.D., Harlan

The policy of limiting local interference as much as possible in the treatment of incomplete abortion has become well established. In infected cases, (and perhaps the majority of these cases are unquestionably infected, and certainly the majority are potentially infected), any intra-uterine or intracervical manipulation is dangerous in that the protective zone of leukocytic infiltration may be broken through. Minor injuries to the cervix may provide an entrance for infective organisms and the increased hemorrhage usually accompanying such manipulation, even if it be only finger curettage, is sufficient to lower systemic resistance appreciably, with consequent predisposition to severe infection.

The use of any method of treatment that aids in making local interference unnecessary is advisable and beneficial in all cases of abortion and is particularly so in infected cases and in interruptions during the middle trimester of pregnancy.

The use of pituitrin as an active aid in emptying the uterus in cases of inevitable or incomplete abortion deserves emphasis. Although its value is greatest in the active stage of abortion, it is applicable at any stage and its proper administration should be carried out in every case of interruption of pregnancy in which there is retention of material that should be expelled. If its use is not entirely successful in emptying the uterus, at least it can do no harm and the stimulation of uterine contraction is beneficial in controlling bleeding and reducing possibilities of infection.

Oxytocic drugs have long been favorites in the treatment of interruption of pregnancy, but have had their chief use as part of the after-treatment. After the uterus is empty, these remedies are valuable in aiding firm and continuous contraction of uterine muscle, which is most favorable for prevention of infection and hemorrhage.

Henrard[1] advises the use of quinin given intravenously, intramuscularly and by mouth in all cases of febrile abortion for its oxytocic action in emptying the uterus. He reports 88 per cent success in active abortions and 52 per cent success in retained placenta cases. He warns that there is some tendency to increased hemorrhage. Gordon[2] gives 0.5 c.c. pituitary extract every three or four hours in cases of retained placenta. Lipkis[3] reports the use of 0.5 c.c. pituitary extract given every day or every other day until the placenta is expelled in incomplete abortion and states that the results are much better than following curettement.

Several of the obstetric texts do not mention the use of pituitrin in abortions. DeLee[4] states, "following tamponade, quinin, grs. 3, every hour for five doses, followed by pituitrin, one ampoul every four hours, will sometimes hasten expulsion of the ovum."

In the active stage of abortion, at which time the majority of cases are first seen, with hemorrhage following varying periods of uterine pains, (frequently expulsion of the fetus has taken place), the administration of 1 c.c. of full strength pituitrin will, in a large percentage of cases, be followed in a few minutes by the patient's desire to be up on a chamber and the first straining by the abdominal muscles brings the intact placenta into the vessel. Hemorrhage, which may have been profuse, naturally ceases as the uterus is emptied, and the pituitrin promotes firm uterine contraction for at least a few hours.

The patient first seen some hours after fetal expulsion, with the placenta retained, is given 1 c.c. of pituitrin and in the absence of severe bleeding this dose is repeated in one hour if the placenta has not been passed or cannot be expressed by moderate abdominal pressure. If at the end of the second hour the placenta has not been expelled, under aseptic precautions and after surgical preparation, a vaginal and intracervical examination is made, which commonly reveals the placental mass in the vagina or cervix, from where it can easily be delivered by the fingers, at times aided by a ring forceps.

The patient with incomplete abortion first seen one to several days after the fetal expulsion, which make up the largest number of septic cases, is given 1 c.c. of pituitrin every three to four hours, and in the absence of urgent indications, the delivery of the placenta is awaited conservatively.

The result of this treatment of incomplete abortion in the active stage is successful emptying of the uterus in over 90 per cent of the cases, the placenta being expelled promptly after the injection of one ampoul of pituitrin. In the occasional failure of the uterus to expel its contents, an intracervical or intra-uterine pack, depending on the surroundings and the amount of cervical dilatation, is placed, tight vaginal tamponade is carried out, and twenty-four hours later one ampoul of pituitrin is given and the packing removed. If the uterine content is not expelled with the packing, further treatment may be either active or conservative. In the absence of sepsis manual removal of the placenta is perhaps preferable at this stage.

In the intermediate cases fully 50 per cent respond to the pituitrin, by either delivering the placenta or by separating it sufficiently so that traction on it with the fingers or with a ring clamp will deliver it without the need of anesthesia or curettage. In the unsuccessful case either packing or surgical removal of the placenta may be carried out.

In the late cases where there is most often sapremic absorption, if not actual septic infection, the use of pituitrin is much less effective than in the active or intermediate stage. Occasionally, however, its administration is followed shortly by expulsion of the decomposing mass of placental tissue, and if it is not thus successful its use is of value in aiding contraction of the uterus and lessening septic absorption. At any rate the use of pituitrin has in no way interfered with the standardized expectant treatment which is best for this type of abortion.

The medical attendant is most often called to the aborting patient during the active stage, because of pain or bleeding, or both. It is at this time that the use of pituitrin is most effective and its administration at this stage will reduce the number of intermediate and late cases to a minimum.

As has been proved by experimental methods and by its use at term and during labor, pituitrin is a powerful stimulant of uterine contractions that already have become established, but is much less an instigator of contraction in the quiescent uterus. This fact explains the frequent successful emptying of the uterus by pituitrin in active abortions and its lessened effectiveness at later stages.

Pituitrin has an additional very valuable use in the treatment of abortions. When, for whatever reason, it seems necessary to empty the uterus by surgical means, manually or instrumentally, 1 c.c., given immediately preceding the operation, checks bleeding, and makes the uterine muscle much firmer, thus making the cleaning out of the uterus safer and easier in that a perforation of the wall is much less likely than with a soft, relaxed uterine muscle. Frequently with this use of pituitrin a curettage is followed with so little bleeding that packing seems unnecessary, though it may be advisable for the purpose of insuring early removal of the particles of placental tissue usually left by the curet. This use of pituitrin is highly recommended by Furniss[5], and is mentioned in a recent text by Cherry[6].

There are practically no contra-indications to the use of pituitrin in abortions. The ever-present danger in its use at term of causing or contributing to uterine rupture is scarcely possible in abortion. The blood-pressure raising effect of pituitrin might be a contra-indication in an occasional patient, though the age of patients suf-

fering abortions is generally several years under that at which hypertension and degenerative arterial changes are found. Valvular conditions of the heart are unlikely to be affected by the moderate increase in blood-pressure brought about by the injection of one or even several doses of pituitrin.

SUMMARY

Pituitrin in full doses should be given as a routine measure in all abortions, when they are first seen. It is successful in evacuating the uterus of its contents in 90 per cent of early cases and to a lesser extent in all cases. It checks hemorrhage and lessens liability to infection. It is also valuable preliminary to curettage, where this is indicated. There are no contra-indications to its use in abortion.

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IODIZED OIL INJECTION IN THE DIAGNOSIS AND TREATMENT OF STERILITY

W. L. DOWNING, M.D., and W. W. LARSEN, M.D.
Le Mars Clinic, Le Mars

Since Sicard and Forestier in 1922 advocated the general use of iodized oil for roentgenologic demonstration of body cavities, this procedure has had wide application. Iodized oil has many uses in gynecology in visualizing the pelvic organs. By its use one can demonstrate anomalies of the genital tract and can determine the presence of tubal occlusion. It also aids in the diagnosis of pelvic tumors and the outlining of uterine fistulae.

In this paper the value of iodized oil will be limited to its use in the diagnosis and treatment of sterility. Statistics show that about 12 per cent of marriages are sterile, and contrary to popular opinion, the defect is not always in the wife. If the defect is in the female it may be located in the cervix, uterus, fallopian tubes or ovaries. Gonorrheal inflammation in the tubes with resulting occlusion of their lumen is the predominating factor in the causation of sterility in women.

Anatomy and physiology of the tubes as shown by salpingography.

Heuser and others have shown a sphincter to be present in the interstitial portion of the tube. At the cornu the tubes are thickened with the lumen in the shape of a funnel with its base toward the uterus. The snare formation in the cornu seen in all films of normal tubes is undoubtedly produced by the action of the sphincter. Romcke has demonstrated histologically the anatomic substratum of this sphincteric action. Annular muscle fibers from one to one and a half millimeters wide have been found to be present. In the films the closure of the sphincter is not always complete but it may be visualized closed or relaxed. The use of atropin has been advocated by some to relax the sphincter.

Contra-indications to uterosalpingography. The contra-indications to the intra-uterine injection of a contrast media are few but definite:

1. Pregnancy. Iodized oil has been injected to aid in the diagnosis of early pregnancy; however, since abortion often results and serious damage may be caused to the offspring, its use should be avoided.

2. Uterine carcinoma. If uterine carcinoma is suspected the oil should not be injected as it may force carcinoma cells into the tubes or peritoneal cavity.

3. Acute gonorrhea and acute salpingitis. For obvious reasons the test is unwise when acute inflammation is present in the genital tract.

4. During menstruation and in case of severe uterine hemorrhage iodized oil should not be introduced into the uterine lumen.

Lipiodol. The preparation of iodized oil most commonly used is lipiodol, which is a chemical compound containing 40 per cent iodin firmly bound in a vegetable oil (poppy seed). This chemical is non-toxic and non-caustic and will not cause peritoneal irritation or adhesions. Lipiodol apparently has no direct bactericidal properties. If a reddish discoloration is present, iodin has been liberated and the preparation should be discarded.

Preparation of the patient and technic of injection. The lipiodol injection may be made in the office and the technic is simple. A preliminary enema is given to aid visualization. Opiates are not needed as but little pain is experienced. Self-retaining instruments can be obtained at any surgical supply house. Sterile instruments are used and an aseptic technic is carried out. The patient is placed in a recumbent position on a Bucky diaphram. The vaginal speculum is introduced and the cervix swabbed with iodin.

The cervix is then grasped with a tenaculum and the cannula inserted until the rubber olive presses firmly into the cervical lumen as a plug so as to prevent leakage. Oil warmed to 105 degrees is then slowly introduced by means of a syringe, 5 c.c. usually being sufficient. Occasionally as little as 3 c.c. or as much as 8 c.c. is injected. Mild cramps are frequently felt, due to uterine contractions, but they are of short duration. Within five or ten minutes stereoscopic films are taken and they are developed at once. If the oil is in the peritoneal

cavity no additional films are necessary. If the oil is still in the uterus or tubes another film is taken in about an hour. If the oil has not escaped from the tube in one hour the patient is asked to return in twenty-four hours for additional films as the oil may by that time have seeped through the tubes into the peritoneal cavity.

Findings in normal uterosalpingogram. Normally the contrast medium shows the uterine lumen shadow to be triangular in shape with the apex of the triangle at the cervix and the base at the fundus. The size varies with the size of the uterus



Fig. I.
Normal uterosalpingogram. Note triangular uterine shadow, Constriction ring at cornual end, hair-like shadow of proximal portion, wider diameter of fimbriated end, small deposits of oil in peritoneal cavity. (Uterus pushed to left by cannula.)

and the degree of tonicity. The proximal portion of the tube casts a fine, hair-like shadow which increases in diameter as the fimbriated end is outlined. A ring-like constriction due to the action of the sphincter is usually seen at the cornual attachment of the tube. The position of the tubes is not constant but is usually lateralward.

Oil which has escaped through the fimbriated end of the tube is free in small, smooth, globular shadows which are readily differentiated from shadows of oil still in the tubal lumen. Oil occasionally escapes into the venous system and enters the general circulation but this complication seems without harm. The ultimate fate of the oil after it distributes itself in the peritoneal cavity is uncertain. It probably is absorbed by the lymphatics within two to eight weeks. Occasionally the oil may be absorbed by capillary action of the fimbriated end of the tube and eventually be expelled from the uterus into the vagina. If the tubes are not visualized it may be because not enough intrauterine pressure was produced or because the oil escaped into the vagina. The injection should be repeated before arriving at definite conclusions.

Lipiodol findings in sterility. By means of the iodized oil injection one can determine the patency or occlusion of the tubes and can localize the site of the obstruction. One or both tubes may be occluded and the obstruction may be in any portion of the tube. In the majority of cases the occlusion is at the fimbriated end, as 75 per cent of the pathology in the tubes is at this site. The contrast medium also aids in determining if operative measures are indicated. If the occlusion is near the fimbria salpingostomy may be done with some hope of success, but if it is near the cornu the operation is not apt to succeed.

The tubes may be occluded in one or more injections and eventually become patent, possibly due to the effect of the oil. Many observers are of the opinion that the oil aids in the absorption of old inflammatory exudates even though it has no direct bactericidal effect. Many women become sterile after the first pregnancy and labor, because of postpartum infection or the flareup of a quiescent gonorrheal infection, either of which may produce a salpingitis and consequent tubal occlusion. The iodized oil injection renders these tubes patent if the adhesions are not too dense, and subsequent pregnancies result.

No definite statistics have been compiled as to what percentage of women become pregnant after lipiodol injection but many cases have been reported.

This harmless procedure does have definite therapeutic value in overcoming tubal defects which produce sterility. Another value of this procedure is that it frequently determines that



Fig. II.
Bilateral obstruction of tubes at cornual end.

other operative measures are not indicated. Obviously cervical dilatations, curettage and uterine suspensions are without therapeutic value in sterility if the tubes are not patent. The following brief case reports illustrate some of the advantages of lipiodol injections.

Case 1. Mrs. P. D., aged thirty-three years, had been married ten years, with no pregnancies. Her menses began at fourteen, were of the twenty-eight day type, normal in character, with some dysmenorrhea, and no leukorrhea. There was no history of gonorrhea in either patient or husband. No contraceptives had been used. Examination revealed a somewhat obese female, whose general physical examination was negative. Pelvic examination showed the cervix normal and not stenosed. The uterus was of normal size and position. The adenexa were normal.

Five c.c. of lipiodol were injected without much pain. Films showed the uterine cavity well filled but the tubes not visualized. One month later two injections were made. Films showed the uterus distended, the shadow was normal and both tubes were occluded at the cornu. Films one hour and twenty-four hours later showed no oil in the tubes



Fig. III.
Fimbriated end of tubes still visualized. Oil globules present in peritoneal cavity.

or peritoneal cavity. The diagnosis was bilateral tubal occlusion at the cornual end.

Case 2. Mrs. R. S., aged thirty-five years, had been married for twelve years, with no pregnancies. Her past history was negative. Her menses began at twelve, were normal in character, with no leukorrhea. There was no history of gonorrhea in either patient or husband. No contraceptives had been used. General physical and pelvic examinations were negative. The injection of 6 c.c. of lipiodol caused slight cramps. Films showed the uterine lumen well filled and normal. The left tube was visualized and oil was present in the peritoneal cavity on the left side. The right tube was occluded at the uterine end. The diagnosis was occlusion of the right tube, at the cornual end.

Case 3. Mrs. R. C., aged twenty-eight years, had been married for six years, with no pregnancies. Her health was good. Her menses began at fourteen, were of the twenty-eight-day type and normal. There was no history of gonorrhea in the patient or her husband, and she had no leukorrhea. No contraceptives were used after the first year of married life. General physical examination revealed nothing of interest. A bimanual examination showed a normal cervix and uterus. The adenexa could not be palpated and there was no tenderness. Five c.c. of lipiodol were injected July 27, 1927. Films showed the oil in the uterine lumen and tubes and it was escaping from the fimbriated end of each tube. The diagnosis was patent tubes. On August 16 the patient missed her menstrual period, her pregnancy was normal and on May 28, 1928, she was delivered of a healthy eight-pound girl.

Case 4. Mrs. V. C., aged twenty-eight, had been married for six years, with no pregnancies. Her menses were irregular, every four to ten weeks, with normal flow, and no dysmenorrhea. There was no history of gonorrhea in the patient or her husband. No contraceptives had been used other than mild douches. The patient experienced general good health. Physical examination was negative. Bimanual examination showed a normal cervix, no erosion. The uterus was normal in size, anteflexed, with no adenexal mass or tenderness. Six c.c. of lipiodol were injected into the uterus on February 15, 1930. Films ten minutes, one hour and twenty-four hours later showed both tubes filled with oil but no oil escaping from the fimbriated end of the tubes. The patient was advised to wait a few months and have the injection repeated. She menstruated normally in March, April and May. In June she did not menstruate and in July and August she had a slight show for one day. On the tenth day of February, 1931, the patient was delivered of a normal seven-pound boy.

(Note: Since this paper was submitted for publication two other women have become pregnant following lipiodol injection. The first, a woman aged thirty-seven, married for four years, had five menstrual periods after lipiodol injection and is now four months pregnant. The second, aged twenty-six, married for six years, had three normal menses after lipiodol injection and is now three months pregnant. In each case the tubes were found to be patent.)

METASTATIC EPIDURAL SPINAL ABSCESSES

REPORT ON FOUR CASES

Frank A. Ely, M.D., Des Moines

Metastatic epidural spinal abscesses are not frequently encountered in general medical practice, but when it is remembered that almost any superficial focus of infection may cause them, it may not be amiss if attention is again called to the clinical aspects of this interesting condition.

By way of emphasizing diagnostic features I will briefly summarize four case histories. A man, forty-five years of age, suffered from a carbuncle on the outer surface of his right leg. Three weeks after its healing and when apparently in perfect health, while working in the field, he was seized with a severe girdle pain in the lower thoracic region; this was soon followed by a chill; temperature rise; and severe pain in the mid-dorsal region of the spine. On admission to the hospital, three days later, complete sensory and motor paralysis extended from the ninth thoracic segmental dermatome downward. The temperature ranged from 101° to 103 2/5° F., and the leukocyte count was 20,000. Inspection of the spinal column revealed nothing at first, but on the third day after hospital admission, the spinus process of the seventh dorsal vertebra seemed unduly prominent and was painful on pressure. The spinal fluid obtained on the first day of hospitalization was under slightly increased pressure; was clear but of a light yellow color; the Wassermann was negative and there was no increase in cells, but the excess of globulin was so great that the fluid underwent spontaneous coagulation in the test-tube. A diagnosis of epidural spinal abscess at the level of the seventh dorsal vertebra was made, and on the fifth hospital day, a laminectomy was done. On removal of the laminae of the seventh dorsal vertebra, thick creamy pus welled up in the operative field. Drainage was established, and after a number of weeks, the wound finally healed. This patient ultimately regained some use of his legs, but has since had a spastic paraplegia. X-ray films, taken of the spine prior to operation, failed to reveal any evidence of pathology.

In November, 1921, a young man, aged twenty-three, developed three boils over the right mastoid region, which healed in about ten days. For a period of three weeks, this patient was perfectly well, but at the end of this time, had a chill, developed a fever, and began to suffer from intense persistent pain in the lower thoracic, lumbar, and sacral regions of his spine. When I saw him, on the fifth day of the illness, there was no evidence of sensory or motor paralysis, but retention of urine necessitated catheterization. The spinal fluid at this time was an exact duplicate of that obtained from the patient whose history I have just given. A diagnosis of epidural spinal abscess was made and the family physician advised that signs of level localization would probably soon be demonstrable. Several days passed and no motor or sensory changes developed. The attending physician telephoned me, asking whether he should not do another lumbar puncture. This I advised, with the result that no spinal fluid could be secured, but upon aspiration with a Luer syringe, thick creamy pus was obtained. The young man was immediately admitted to a hospital where a laminectomy was performed. The laminae of the third and fourth lumbar vertebrae were removed and drainage established. Within forty-eight hours after operation, normal function of the bladder was re-established. No x-ray observations were made in this case. The preoperative temperature varied from 101° to 103° F., and the leukocyte count ranged above 18,000.

On October 23, 1927, a young farmer, aged twenty-seven, was admitted to the Iowa Methodist Hospital, in Des Moines, on the service of Dr. A. P. Stoner, and was examined by Dr. T. B. Throckmorton and me. On hospital admission, this patient complained of severe and constant pain in the lumbar and sacral regions. He gave a history of having had successive crops of furuncles during the previous two years. On the morning of October 22, 1927, the patient was awakened by severe pain in his lower spine. He developed fever but no history of chill could be elicited. When first examined by Dr. Throckmorton, the following clinical notations were made: "Pain in lower spine; left cremasteric reflex diminished; knee jerks equal and normal; no Babinski; bodily sensibility normal throughout; rectal sphincter slightly relaxed; tenderness on pressure over sacral region; abdominal walls slightly rigid." A tentative diagnosis of metastatic infection was made. During the first six days subsequent to hospital entrance, this patient's temperature remained in the vicinity of 103° F. and the leukocyte count ranged from 12,000 to 24,000. On October 29, some swelling of the right buttock was observed suggesting an osteomyelitis. An aspirating needle was introduced into the swollen region, but no pus was obtained. On October 30, retention of urine developed and a progressive paraplegia made its first appearance. At this time a saddle anesthesia and analgesia could be outlined over the right buttock, thigh, and anal regions. An aspirating needle, introduced into the sacral cavity via the sacral hiatus,

failed to reveal pus, but on lumbar puncture, although no spinal fluid could be obtained, a large amount of creamy pus was secured by suction. On October 31, our patient developed paralytic ileus and operation was not advised because of the inexcusable risk which it would entail. On November 4 the patient died. Autopsy revealed a metastatic epidural spinal abscess extending from the foramen magnum to the sacral cistern. No evidence of spinal osteomyelitis could be discovered.

A young woman, twenty-one years of age, developed a boil in the left gluteal region. After its healing, she remained perfectly well for a period of three weeks, at the end of which, she complained of pain in the upper dorsal region of her spine, and a stiff neck. The stiff neck and the season of the year, together with slight fever, suggested poliomyelitis, but the spinal fluid at first puncture was perfectly normal. This patient had no distinct chill, the preoperative temperature ranged from 98° to 101 2/5° F., and the leukocyte count from 8,700 to 24,300. Careful examination of the spine directed our attention to the fourth dorsal spinus process which seemed to be a little prominent and painful on pressure. This finding was at first so inconspicuous that I doubted its significance. A second lumbar puncture on the fourth day of the illness gave a normal fluid, but jugular compression revealed a partial arachnoid block. Up to this time, there had been no evidence of paraplegia and at one time the temperature and leukocyte count fell to normal. On the eighth day of illness, the patient complained of weakness in the thigh muscles and inability to retain her urine. At this time a third lumbar puncture was made, revealing a normal spinal fluid, but a definite arachnoid block. A diagnosis of metastatic epidural spinal abscess was made and a laminectomy performed. The third and fourth dorsal laminae were removed and thick pus evacuated. Following the operation a complete motor and sensory paralysis developed which extended from the sixth dorsal segmental level downward. At the present time, three weeks after laminectomy, this patient is slowly regaining sensation in the lower extremities and is having frequent involuntary contractions in the leg muscles.

In the first, second and fourth cases, the staphylococcus aureus was recovered in cultures from the abscess areas.

From this report, for the purpose of brevity, all unnecessary clinical detail has been eliminated, but in conclusion, I wish to present what I believe to be the pertinent diagnostic conclusions which may be drawn from observation of these patients.

(1) A furuncle or boil, located on any portion of the body surface, may be the original infectious focus from which a metastatic epidural spinal abscess may take its origin.

(2) It is probable that the development of an epidural spinal abscess occurs some time after the mother focus has apparently healed.

(3) Severe and persistent pain in a somewhat circumscribed area of the spine, following a superficial furunculosis, should make us think of the possibility of epidural spinal abscess.

(4) Discovery of a slightly prominent painful spinus process in association with a previous furunculosis is a strong indication of spinal abscess.

(5) A beginning paraplegia, superimposed upon the previously related sequence of events, calls for a lumbar puncture, during the performance of which, the color of the fluid and presence or absence of arachnoid block should be noted.

(6) The presence of a yellow spinal fluid with a high globulin and total protein indicates arachnoid block above the level of the point of puncture.

(7) In epidural spinal abscesses the temperature is usually persistent, and ranges from 100° to 103 2/5° F., while the leukocyte count is seldom below 12,000, and may be as high as 25,000.

(8) X-ray films of the spine, in these cases, seldom afford any diagnostic assistance.

(9) Laminectomy should be done as early as possible, consistent with satisfactory localization because a resultant paraplegia depends on three factors: (a) pressure from a circumscribed collection of pus, (b) inflammatory thickening of the spinal dura, (c) contiguous inflammation of the spinal cord. All of these factors can best be eliminated by drainage.

(10) Some strain of staphylococcus is the common invading microörganism.

Of the four patients whose histories have been reported, one partially regained the use of his legs; one made a complete recovery; one died, and one is making a rapid recovery which will probably be complete, owing to the fact that laminectomy was performed before the paraplegia had become fully established.

INTRAVENOUS PYELOGRAPHY

LAWRENCE E. PIERSON, M.D., Sioux City

The introduction of uroselectan as an intravenous dye for pyelography has recently been announced by Von Lichtenberg of Berlin, and his associates. It is quite significant that such an announcement be made by none other than the individual, who served as the first human subject for pyelography, performed by means of the

cystoscope. Many new problems and questions are the natural result of such a great step in the progress of medicine, the most important issue being that of actual benefit to the patient. The following discussion is based on a series of approximately seventy-five intravenous pyelograms taken from a urologic service and compared to similar cases, pyelographed by the catheter and injection method, referred to as the cystoscopic or retrograde pyelogram.

Owing to its simplicity, the intravenous administration of dye in pyelography is much easier on the patient. An intravenous injection of 100 c.c. followed by a series of x-ray exposures is no physical hardship. The only sensation consists of a sense of warmth and flushing of the face and neck. Any reaction other than this is due to faulty technic, such as too rapid injection, and cannot be charged to intravenous pyelography. Uroselectan is an iodin combination of the pyridin group and contains 43 per cent iodin, held in combination so that it is not liberated in solution. The dose is 40 grams and is absolutely non-toxic.

In this series the solution was given by the syringe method. With a glass syringe 50 c.c. were injected into the vein of either arm. After a period of about five minutes, the remaining 50 c.c. were injected into the other arm. A few exceptions were made where the entire solution was injected in one arm, without much discomfort, although the use of both arms is recommended. The test can be an office procedure, since all of the dye is out of the blood stream within fifteen minutes. It is very evident that such a simple test will result in a financial saving to the patient.

The true value of an examination, however, lies not entirely in the immediate comfort of the patient during the manipulations, nor in the actual financial saving, but in the ultimate results of that examination. Let us, therefore compare the ultimate results of the two methods, intravenous and cystoscopic pyelography.

By means of the cystoscope, the bladder is examined by actual observation of the mucosa in a normal environment and specimens are obtained from individual kidneys. The resulting pyelograms are, on the average clear and readable, the patient having a very good chance of not being required to undergo a re-examination. Herein lie some of the failures of the intravenous pyelogram. The bladder is not examined directly and consequently, if an intravenous pyelogram shows evidence of, for example, tuberculosis in a kidney and even if this is confirmed by the presence of acid-fast bacilli, there is no way of determining the condition of the bladder. Nor is there any degree of certainty whether one or both kidneys are involved, as separate renal specimens are not obtained. Even in cystoscopic pyelograms, the diagnosis of renal tuberculosis rests more on the presence of bacilli than on the pyelographic evidence, although both are essential for the complete diagnosis. It must be admitted that the average intravenous pyelogram is not as clear-cut nor as completely filled as the cystoscopic pyelogram. This is easily understood when one recollects that the renal pelvis is not a reservoir. Consequently many early lesions, such as tuberculosis, pyelitis, tumors and polycystic kidneys, will be overlooked; cases in which the clearest outline possible is most essential for any degree of certainty in making a diagnosis. Hydronephroses form the best pictures, since in this condition the renal pelvis has been modified into a reservoir by the obstruction.

Intravenous pyelograms have been compared to cholecystograms according to the Graham-Cole technic but such a comparison is not logical, as the function of the kidney is absolutely opposite to that of the gall-bladder, the former being an excretory duct and the latter a reservoir.

Satisfactory ureterograms can be obtained, in the great majority of cases, by injecting sodium iodid as the catheter is being withdrawn from the ureter. This allows the ureter to become well distended with media throughout its entire length. Normal peristalsis transports urinary secretion in a series of waves, any one of which may be seen in x-ray. These have been erroneously diagnosed in some cases as strictures of the ureter. A greater percentage of correct interpretations will result, when ureters are distended in their entirety, rather than in one or two local areas. Of course, we must bear in mind the possibility of ureteral catheters straightening ureteral kinks, but such lesions rarely produce symptoms or pathologic conditions.

Uroselectan can be used in place of sodium iodid and bromid for injecting through catheters in making pyelograms. It is diluted to 20 per cent instead of 40 per cent as for intravenous use. Such a medium forms very clear and satisfactory pictures.

Cystograms resulting from the intravenous route are highly satisfactory in every way. No faults are seen in comparison to the injection method, with one possible exception. If only a cystogram is desired, it seems a roundabout method as compared to the insertion of a rubber catheter. Variations in renal function alter the excretion and resulting accumulation in the bladder. There may be some doubt as to the optimum time for x-ray and in some cases more than one exposure must be made.

A method has also been devised, by means of which the amount of uroselectan excreted can be determined by chemical examination. It is more elaborate and more technical than the phthalein test in use at the present time and requires the services of a chemist. A rough estimate of the function can be obtained by the density of the shadows and the speed of accumulation of dye in the bladder. In forming such an estimate, however, one must bear in mind that hydronephroses retain their secretion and will easily form a false impression of function.

Interpretation of pyelograms depends on the clearness and degree of filling, which in turn depend on the rate of the excretion. Pathologic kidneys, those cases in which we need the best of pyelograms, often have diminished function, thus decreasing the chances for an accurate diagnosis. In regard to this point, Hirsch makes the following statement: "Sharp and clear visualization may be expected only when the kidney function is normal. Depending on the degree of parenchymal damage, there is poor or delayed or no visualization whatever. If there is no outlining of the pelvis and calyces, it is either because there is no kidney or the function has been destroyed. Thus renal tumor, severe infection and pyonephrosis give no visualization, while malformations in which function is maintained are clearly delineated."

It would be interesting to theorize on the final outcome of intravenous pyelography. Let us hope that it will not be merely another routine test to load on the patient, because that load is already a rather heavy one for many of our patients.

No doubt some cases will escape cystoscopy by submitting to intravenous pyelography, but on the other hand, many cases will come to cystoscopy after an intravenous pyelogram has failed to furnish the necessary information. By careful forethought and selection of cases, we should be able to prevent this new method from being included in our long list of so-called routine tests. One of the principles to be kept in mind in making a urologic study of a case is as follows: the diagnosis rests not entirely on the pyelogram; in fact the pyelogram is the last step.

In closing, allow me to quote Kretschmer in a recent issue of *Surgery, Gynecology and Obstetrics*. He states, "Finally it should be emphasized that even though the desired data have been accumulated from the standpoint of the pyelograms, it is still necessary, before surgical procedures are carried out on the kidney, to examine the patients with the cystoscope, to catheterize the ureters, to carry out the usual careful examinations to determine the presence of pus and blood, to make bacteriologic studies for infection—making stains for tubercle bacilli and guinea-pig tests and to ascertain the differential function of the kidneys."

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THE BLIND AND DEAF-MUTES IN THE UNITED STATES

Statistics of the blind and deaf-mute population enumerated in connection with the 1930 census, classified by sex, color, and age, have been issued by the Bureau of the Census in a bulletin entitled, "The Blind and Deaf-Mutes in the United States: 1930." This is a pamphlet of 23 pages, consisting mainly of statistical tables, showing the enumerated blind and deaf-mutes by geographic divisions and states as well as by cities of 100,000 inhabitants or more.

A total of 63,489 persons were reported as blind by census enumerators, and the ratio of blind to the general population, on the basis of the returns, was 517 per million. A total of 57,084 persons were reported as deaf-mutes, the ratio of deaf-mutes to the general population, on the basis of the returns, being 465 per million in 1930.

In addition to those reported by enumerators either as blind or as deaf-mutes, there were 1,942 persons reported in 1930 as being blind deaf-mutes.

Of the individual states, New Mexico showed the highest ratio of blind to the general population, while Wyoming showed the lowest ratio. Kansas showed the highest ratio of deaf-mutes to the general population, while Wyoming, which showed the lowest ratio of blind, showed next to the lowest ratio of deaf-mutes. The lowest ratio was shown by the District of Columbia.

In addition to the statistical tables, the bulletin which has just been issued contains a brief history of the enumeration of the blind and of deaf-mutes and a comparison of methods and results since the first enumeration, which was made in connection with the census of 1830. A copy of the bulletin may be obtained by writing to the Bureau of the Census, Washington, D. C.

Dr. Ruttin to Give Clinics

Arrangements have been completed to bring Dr. Erik Ruttin, of Vienna, to America in the spring of 1932, to give courses on diseases of the ear, in several of our mid-western cities. Des Moines has been offered one week of Dr. Ruttin's time, provided a class of from fifteen to twenty men can be secured to take the course, which is open to any otologist. Anyone who is interested should write immediately to Dr. C. L. Chambers, 903 Equitable Building, Des Moines, who will supply more detailed information. A tentative date the last week in April has been offered.

College of Medicine
State University of Iowa

(From the Proceedings of the University Hospital Medical Society.)

RADIUM TREATMENT OF CARCINOMA OF THE CERVIX*

Preston T. Brown, M.D.

The use of radium in the treatment of carcinoma of the cervix dates back over twenty years. It has achieved a place of prominence in the last ten years, and its value is generally recognized. In spite of this progress there is wide disagreement as to dosage and methods of application, as well as in theory. Although markedly different technics are employed, the foremost clinics report approximately the same percentage of satisfactory results. It is felt by some that the utmost is being achieved by modern methods of radiation treatment, and that improvement can be expected only from earlier diagnosis. Cancer sufferers who are treated outside of a relatively few institutions have no general assurance that therapy will be adequate. It is to emphasize some points in effective radium treatment that this summary is offered.

There are a few elementary facts about radium which may well be reviewed before proceeding to a discussion of its use in treatment of cervical cancer. Radium is one of a series of elements which are radio-active; that is, they give off spontaneously some form of radiation (alpha, beta, or gamma rays), and, in the course of time, are transformed into other substances of lower atomic weight. The end product of this series of elements is non-radio-active and has the chemical properties of lead. (See chart I.) The rate of transformation is fixed for each member of the series but varies greatly among the different members, and it is quite independent of the amount of the substance. The rate of change is arbitrarily indicated by the time which is required for the substance to become reduced to one-half of its original value.

For therapeutic purposes, either radium element is used in the form of sulphate or chlorid, or radium emanation (radon) is obtained from a solution of radium salt by means of appropriate pumps and is enclosed in suitable containers. Maximum radiation is given off only after the tube containing radium element has been sealed for a period of three or four weeks; this time being required to establish an equilibrium between the various members of the series. The more rapid degeneration of radon (see chart I) makes delay unnecessary.

*From the Department of Obstetrics and Gynecology, College of Medicine, State University of Iowa.

Radium gives off three distinct types of radiation; alpha, beta and gamma. (See chart II.) Gamma rays are given off mainly by radium B and C but not by radium element nor by radon. In the treatment of carcinoma of the cervix only gamma rays should be employed. The alpha rays are readily filtered out as they cannot penetrate even a layer of heavy note paper, and beta rays are absorbed by thin metallic screens. (The equivalent of one millimeter of lead or one-half millimeter of platinum removes practically all of the beta rays. See Chart III.) By increasing the thickness of the filters beyond that necessary to exclude beta rays, some of the longer gamma rays are absorbed and a more selective type of radiation is obtained. When gamma rays are projected upon a screen such as these metallic filters, secondary beta rays are developed, which have the same biologic action as the primary beta rays. To exclude such secondary radiation, the metal container is surrounded by a layer of rubber, felt, silk, or paraffin.

There are at the present time four methods of applying radium: (1) surface radiation, the placing of radium containers on, or at a short distance from, the skin; (2) cavity radiation, placing the radium within the natural cavities of the body in contact with the neoplasm; (3) interstitial radiation, glass or gold seeds containing radon are left permanently in the tissues, or needles may be inserted and removed after completion of the treatment; (4) external radiation from a distance, when several grams of radium, in a pack or bomb, are used to direct a beam of rays at the involved area through one or more portals. Of these, the first is not used in treatment of uterine carcinoma, while the fourth is limited to those institutions possessing large amounts of radium.

Nothing can be said about the biologic principles underlying the use of radium in the treatment of malignant disease, which is not subject to controversy. Alpha rays possess almost no action upon the tissues. Beta rays are equally caustic on normal and neoplastic tissues. Gamma rays have the property of destroying the cells of certain malignant tumors without appreciably affecting adjacent normal tissues. This latter statement is generally accepted at present, but there is considerable dispute as to the mechanism by which the result is obtained. One group of investigators insists that the destruction of the neoplastic cells is the effect of a direct, selective action of the gamma rays, while others contend that the principal action of radiation is upon the connective tissues, the leukocytes, and blood vessels.

In carcinoma of the cervix it is recognized that the epidermoid (squamous-cell) type responds to

radiation much more favorably than do the adenocarcinomas. It is, moreover, fairly well established that those tumors which are rapidly-growing and in which the cell type is more primitive, are more radio-sensitive than the less malignant neoplasms in which the cells are well differentiated.

Before the application of radium in the uterus, the patient should be given a thorough preoperative preparation locally. The general condition of the patient before and after the actual application of radium should also receive attention. The methods of application of radium and the dosages recommended are too numerous to mention, but a useful plan of treatment may be indicated by outlining the routine employed at the University Hospital.

The diagnosis must be established before treatment is started; a biopsy should be taken. Unfortunately, the majority of patients who apply for admission are so far advanced that a clinical diagnosis is readily made but the type of tumor can be determined only by microscopic examination of the tumor tissue. Active treatment is begun with deep x-ray therapy, which is given daily for thirteen to sixteen days. During this time long hot douches are given daily and the cervix is treated by topical antiseptic applications. The importance of these latter procedures in eliminating local infection cannot be too strongly emphasized. If the hemoglobin is below sixty per cent, one or more blood transfusions are given, and iron is administered. The diet is maintained at a high caloric level; fresh air and sunshine are provided as far as possible. It is desirable to perform, routinely, a cystoscopic and proctoscopic examination before applying radium. By following such a preparatory course, the patient is placed in much better general condition for radiation, the local lesion improves, and the amount of pelvic induration often decreases as a result of the subsidence of local infection.

The amount of radium administered (if radium element is used) is measured in milligram hours; that is, the amount of radium, in milligrams, multiplied by the number of hours of exposure. It is, however, necessary to consider the number, size, shape, and placing of the containers, and especially the filtration employed. The dosage given at the first treatment is usually about thirty-five hundred milligram hours. The method of application is as follows: the patient may or may not be anesthe-

THE RADIUM SERIES

SUBSTANCE	ATOMIC WEIGHT	TIME TO DECAY TO HALF VALUE	RAYS EMITTED
RADIUM	226	1680 YEARS	ALPHA & BETA
RADON	222	3.86 DAYS	ALPHA
RADIUM A	218	3 MINUTES	ALPHA
RADIUM B	214	26.5 MINUTES	BETA & GAMMA
RADIUM C	214	19.5 MINUTES	ALPHA, BETA & GAMMA
RADIUM C′	214	10.6 SECONDS	ALPHA
RADIUM C″	214	1.9 MINUTES	BETA
RADIUM D	210	16.7 YEARS	BETA
RADIUM E	210	5 DAYS	BETA & GAMMA
RADIUM F (polonium)	210	136 DAYS	ALPHA
END PRODUCT (Lead)	206	NON RADIOACTIVE	

CHART I

tized; if no anesthetic is given, the knee-chest position gives better exposure, but is rather awkward with an unconscious patient. The cervical canal is located, often only after a diligent search, and the length of the uterine cavity determined with a sound. The cervix is then dilated gently to a suitable size with Hegar dilators. Two tubes of radium in tandem screened by the equivalent of one and one-half millimeters of brass are inserted into the uterine cavity, the larger amount of radium being placed in the cervical portion of the canal. A placque of felt containing similar tubes is then laid against the portio, the tubes being parallel and lying in the antero-posterior diameter of the vagina. Two to four tubes are required to cover the portio adequately. The lateral tubes of the placque are well out in the fornices, so that some parametrial radiation is obtained. The placque is held in place by a tight gauze packing. Of the total of 3,500 milligram hours, 1,500 are given in the uterine cavity and 2,000 on the portio. The time of exposure is 24 to 30 hours. During this time a retention catheter is left in the bladder and opened every four hours. The patient's mouth temperature is taken every hour when awake, and the radium is removed if a persistent rise occurs.

The post-radiation convalescence is rarely complicated and within three to four days the patient is allowed to go home. She is instructed in the necessity of resting, having an abundance of fresh air and sunshine, maintaining a good diet, and continuing the douches.

At the end of six to eight weeks the patient returns for a second course of x-ray, which is likewise followed by an application of radium. At this time, the dosage varies from 1,500 to 2,500 milligram hours, the amount being governed largely by the capacity of the shrinking vagina. After the second course of treatment the patient is called back for examination every two months for a period of one year. If there is evidence of local recurrence in the cervix or vaginal apex, additional radium is applied; if parametrial extension seems to persist or increase, further x-radiation is given. During the second year after the beginning of treatment examinations are made at less frequent intervals, and still less frequently in succeeding years. An attempt is made to follow the patients by personal examination for a period of five years, but this is difficult because of the distances at which many patients live and because of the lack of adequate social service control.

PROPERTIES OF THE RAYS

RAYS	NATURE OF RAYS	VELOCITY	PENETRATION	BIOLOGICAL ACTION
ALPHA	POSITIVELY CHARGED HELIUM ATOMS	20,000 MILES PER SECOND	VERY SLIGHT	NIL
BETA	NEGATIVELY CHARGED ELECTRONS	0.7 TO 0.9 SPEED OF LIGHT	99.9 % FILTERED BY 1MM. OF LEAD	MARKED CAUSTIC OR NON SELECTIV E
GAMMA	ELECTROMAGNETIC DISTURBANCES OF SHORT WAVE LENGTH 0.01 TO 0.001 ANGSTROM UNITS	SPEED OF LIGHT	50% FILTERED BY 13 CM. OF LEAD	MARKED SELECTIVE

CHART II

Complications following radium treatments are not as frequent as formerly. The chief danger to life is infection. A pelvic abscess, or pelvic or general peritonitis may follow an application in the face of severe deep infection of the neoplasm, but this is of rare occurrence if proper local treatment is given prior to radiation. Nausea and vomiting are occasionally seen—they are rarely severe or lasting. Rectal irritation not infrequently occurs, but bladder discomfort is less common. Fistula formation should not occur if proctoscopic and cystoscopic examinations are performed and radiation withheld when there is marked extension of the neoplasm to the viscera. Pyometra is fairly frequent and is readily treated by cervical dilation.

An evaulation of any treatment for carcinoma

depends upon a careful statistical study after a sufficiently long period has elapsed. In carcinoma of the cervix, it has been generally accepted that a patient who is free of symptoms and signs of the disease five years after beginning treatment, may be considered as having been successfully managed. The published results of the clinics where large numbers of patients are treated by radium and x-ray and are examined repeatedly over such a period of time represent the best information which we possess regarding the value of the procedure in the treatment of malignant disease. Such statistics are not yet available from the University Hospital, for the present method has not been under trial for a sufficient period; but such institutions as the Memorial Hospital in New York, the Howard A. Kelly Hospital in Baltimore, the Radium Institute in Paris, and the Radiumhemmet in Stockholm, report five year cures varying from 50 to 70 per cent in the early cases of cervical cancer. The results in borderline cases are not so favorable but run from 10 to 27 per cent. In advanced cases, a small but definite percentage (4 to 18 per cent) of patients are found to be completely free from evidence of the disease at the end of five years. In the latter cases there is no dispute about the method of treatment, for operative methods hold no hope of cure. On the other hand, it must be admitted that operative treatment of the early cases by experts yields results that are practically the same as those achieved by radiation.

The problem of cervical cancer at the present time has two important aspects. The first is the necessity of making earlier diagnoses. The public must be educated to recognize the very early symptoms of the disease and to appear for examination immediately; and, of equal importance, the profession must be induced to think of cancer first and always in women who present themselves with vaginal bleeding. Moreover, every physician must recognize the necessity of the microscopic examination of tissue in every suspicious cervical lesion. Because of the present apparent ascendancy of radiotherapeutic methods, adequate treatment for all will require the establishment of centers where such therapeutic methods can be applied in proper manner and where the follow-up work will be such as to assure accurate statistics. The tremendous expense involved in establishing institutions for the special treatment of malignant disease will require governmental assistance, if large private endowments are not forthcoming. A personnel thoroughly trained in surgery, radiology, and pathology is essential to the success of such organizations,

BETA RAY FILTERS

Thickness necessary to exclude 99.9% of Beta Rays

1	ALUMINUM	3.9 MM.
2	STEEL	1.5 MM.
3	ZINC	1.6 MM.
4	BRASS	1.4 MM.
5	NICKEL	1.3 MM.
6	COPPER	1.3 MM.
7	SILVER	1.1 MM.
8	LEAD	1.0 MM.
9	GOLD	0.6 MM.
10	PLATINUM	0.5 MM.
11	SOFT TISSUE	10.0 CM.

CHART III

which seem to offer the best immediate hope for the proper care of malignant disease.

SUMMARY

1. Epidermoid carcinoma of the cervix is a lesion which responds to radiation applied under satisfactory conditions.

2. Careful pre-radiation care and control by follow-up are very necessary.

3. Results equal to those obtained by surgical procedures (radical, Wertheim, or Schauta hysterectomy) are obtained in early cases by radiation. The mortality and morbidity are much less with the latter type of treatment. Simple total hysterectomy, supravaginal hysterectomy, and amputation of the cervix, as so frequently performed, are not worthy of comparison, since there is practically no chance that they will do anything but hasten the patient's death.

4. Proper technic requires a highly trained personnel and adequate physical equipment.

5. Failure of early diagnosis presents the greatest problem at the present time, and the blame for delay rests equally upon the medical profession and upon the public.

U. S. CIVIL SERVICE EXAMINATIONS

The United States Civil Service Commission announces the following-named open competitive examinations:

SENIOR MEDICAL OFFICER
MEDICAL OFFICER
ASSOCIATE MEDICAL OFFICER

Applications for the position of medical officer, and of senior and associate medical officer, must be on file with the United States Civil Service Commission at Washington, D. C., not later than December 30, 1931.

Applications for senior medical officer positions may be filed for only one of the following named specialties, or indicated combination of specialties: (2) Tuberculosis; (3) Neurology-psychiatry (either one, or the two combined); (4) Roentgenology; (5) Bacteriology-pathology (either one, or the two combined); (10) Eye, ear, nose and throat (any one, or in any combination); (11) Orthopedic surgery; (12) Internal medicine and diagnosis; (13) General surgery; (15) Urology; (19) Cardiology.

Applicants for the medical officer and associate medical officer examinations must qualify in at least one of the following optional branches: (a) Cardiology; (b) Child hygiene; (c) Eye, ear, nose and throat; (d) Genitourinary (urology); (e) Internal medicine and diagnosis; (f) Neuropsychiatry; (g) Pathology and bacteriology; (h) Roentgenology; (i) Surgery (general or orthopedic); (j) Tuberculosis; (k) Venereal disease.

The entrance salary for senior medical officer is $4,600 a year, for medical officer, $3,800 a year, and for associate medical officer, $3,200 a year.

The examinations are to fill vacancies in the Veterans' Administration, Public Health Service, Indian Service, Coast and Geodetic Survey, and Panama Canal Service.

Competitors will not be required to report for examination at any place, but will be rated on their education, training, and experience.

Applicants must have been graduated with the degree of M.D. from a medical school of recognized standing, not more than 20 years prior to the date of making oath to the application. Certain specified training and experience are also required.

Full information may be obtained from the Secretary of the United States Civil Service Board of Examiners at the post office or customhouse in any city or from the United States Civil Service Commission, Washington, D. C.

NEW HEALTH CHARTS ISSUED

A series of eight attractive illustrated black and white charts dealing with child-feeding in a non-technical way has just been issued by the United States Department of Agriculture. Scientific facts govern the recommendations on each phase of child nutrition and training in food habits, as it is presented, but the subject matter selected is popular in scope and the legends are brief and striking.

The subjects covered are: Factors that contribute to good nutrition; signs of good nutrition; training the baby to like a variety of flavors; suitable eating equipment for children; the importance of self-help in good food habits; how to adapt the same food ingredients of a meal to children of different ages; a day's meals for a three-year-old; daily food requirements for every child.

The cost of the series of eight child-feeding charts is twenty-five cents. To obtain them, send money or postal order to the Superintendent of Documents, Government Printing Office, Washington, D. C.

MOUTH ANTISEPTICS

Physicians are frequently consulted by patients desiring information relative to various dentifrices, tooth pastes or powders, and mouth washes for the treatment of pyorrhea. Science has long ago demonstrated the fact that the disease centers deeply in the gums and that no surface antiseptic used as a gargle, wash, or spray, or brushed upon the teeth can reach the germs that cause it.

J. J. Durrett, M.D., chief of the drug control division of the Federal Drug and Food Administration, has started a campaign against unwarranted statements by manufacturers, which has resulted in the seizure of much incorrectly labeled mouth antiseptics and has done much toward correcting misstatements upon the article or package. Dr. Durrett, however, has pointed out that the food and drug act does not have jurisdiction over curative claims made in magazines, newspapers, billboards, or radio advertising.

With this in mind, the physician should be informed so that correct advice may be given which in many instances must contradict statements flaunted before the public by unscrupulous advertisers employing these agencies not controlled by the food and drug act.

STATE HEALTH COMMISSIONER'S PAGE

D. C. Stuhlsatz, M.D.

The most prevalent diseases for the month of October were chickenpox, scarlet fever, diphtheria, smallpox, whooping cough and poliomyelitis in the order named.

CHICKENPOX

One hundred twenty-six cases of chickenpox were reported, as compared with 17 cases for the month of September.

SCARLET FEVER

There was a decided increase in this disease from 50 cases in September to 119 cases in October. Even with this increase, the number of cases for October, 1931, was 14 cases less than have been reported for the same month since 1924. For ten months of 1931 there have been 2,699 cases as compared with 2,242 cases for a similar period in 1930.

DIPHTHERIA

The number of cases of diphtheria reported (76) was more than twice as large as that for September (33) and was larger than any number reported in October since 1926. Woodbury County led the list with 20 cases reported from Sioux City. It was followed by Van Buren County with 13, Scott with 6, and Polk, Jasper, and Fayette counties with 5 each. Up to August 1st, the number of cases each month had shown the lowest incidence of diphtheria in the history of the state. The total of the cases reported for 10 months of 1930 was exactly the same as that reported for 10 months of 1931, viz., 302. The increase in the number of cases in Iowa appears to be a part of a general increase which is country wide. Deaths from diphtheria for nine months of 1931 were 24 as compared with 31 for nine months of 1930. Parents should be advised to have their children immunized, and doctors who attend acute cases should not wait for laboratory reports but should give antitoxin at the earliest possible moment and the average initial dosage should not be less than 10,000 units.

SMALLPOX

More than four times as many cases of this disease were reported for October as for September, 73 as compared with 17. The number of cases reported for 10 months of 1930 was 2,893, while for a like period this year the cases have numbered 1,726, so unless there is a large outbreak the total for the year will be considerably less than the 3,044 cases reported in 1930. However, even 2,000 odd cases of smallpox is too much for a state as advanced as Iowa, when certain other states can go twelve months without a single case.

The general apathy concerning vaccination is resulting in a population unprotected against smallpox. The importation of smallpox of the virulent type would result in many deaths, and such a type of smallpox may make its appearance any time.

POLIOMYELITIS

In August, 1931, the statement was made in a weekly health message that the southeastern portion of the state was relatively free from poliomyelitis in 1930, that it was in those counties in which there were few or no cases that poliomyelitis might be expected to occur during the rest of this year.

This prediction has proved true, for in the counties west of a line drawn from Emmet County on the north to Wayne County on the south there were in 1930, 94 cases and in 1931 only three cases, while in those counties southeast of a line drawn from Dubuque County to Wayne County there were in 1930 only 16 cases and in 10 months of 1931, there have been 77 cases. Des Moines County has contributed the greatest number of cases this year, having reported 34 cases up to November first. During the last seven years there has been an upward trend in the incidence of poliomyelitis of 10 cases a year.

VENEREAL DISEASES

Two hundred sixteen cases of syphilis and 373 cases of gonorrhea were reported.

TRIPS

The epidemiologist made five trips in connection with outbreaks of disease, two of typhoid fever, two of scarlet fever, and one of diphtheria.

The JOURNAL of the
Iowa State Medical Society
ISSUED MONTHLY

Ralph R. Simmons, Editor.....Des Moines

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HUMANIZE THE HOSPITAL

In the researches of the national committee investigating the cost of medical care it has been shown that only about one-third of the actual cost of illness is for professional services. A second larger factor of the expense involved is the result of hospitalization. Standing as it does in so prominent a position, it would seem that the hospital, its management and its control has been insufficiently studied by the medical profession. Stimulated, no doubt, by the researches of this national committee, the committee on medical education and hospitals of the American Medical Association and the National Association of Hospitals have recently made a study of the hospital as an aid to medical practice. Much has been said and written upon the subject of hospital standards and hospital standardization. Careful attention has been given to the curriculum provided for the training of nurses and much debate has been directed to the problems of an open or closed staff. Professional interest of the medical fraternity has rarely gone beyond these limitations since it was felt that the hospital was a privately controlled business institution, owned and operated by a corporation, municipality, or religious body. Recent comment by Joseph Brennemann* directs attention to the fact that the hospital to function effectively must be organized upon efficient business lines emphasizing the human side of its organizational program. This is a matter of considerable concern to the physicians since it so often determines the morale of the patient, his happiness or unhappiness during his hospital stay, and finally, his attitude towards his physician and the retirement of his account at the end of his illness. It is not the perfection of equipment and of organization but the subtler spirit of enthusiastic and self-effacing cooperation, of steadfast, sympathetic loyalty and devotion to a common cause that makes hospitals. "It is the atmosphere, the morale of a hospital, that makes or wrecks its reputation and its usefulness. The children may be well cared for; the medical staff may be made up of able clinicians and investigators; the superintendent may be as wise as Solomon and as 'just' as Aristides, and may see that the whole machinery of administration is well oiled and the physical equipment faultless; the board of trustees and the women's board may be actively interested and may do all that could be desired in other ways; the nurses may be intelligent, faithful and well trained; the interns and residents may be well schooled and prepared for their duties, may, indeed, get up at seven and be at breakfast on time; and yet the vital spark will be lacking if there is not back of it all an all-pervading spirit of cooperation and of kindliness, or, as Emerson has so beautifully expressed it, 'an element of love that permeates it like a fine ether.'"

The present period is one of education. Leaders have realized that much more can be accomplished through education and by taking the patient into confidence than can possibly be achieved by dictatorial methods. The scientific atmosphere is strange to the uninformed mind. In a recent conference on hospital service, the superintendent of a Pennsylvania institution displayed a group of pamphlets circulated by his hospital to the community, explaining to the uninformed the reasons for extra charges for the use of the operating room, for laboratory service and for similar extras on the patient's bill. Man is a reasoning being and as such seldom protests when he is informed. The solution to the hospital's problem would seem to be the development of some form of publicity that would enable the average man to know the why and wherefore of modern medical and hospital methods.

* J. A. M. A., Nov. 14, 1931.

A MEDICAL STUDY CLUB

With the advent of better means of communication through the use of the automobile over hard surfaced roads, there is little in the way of medical education and medical contacts which is denied the physician in the smaller communities. At one time, not so long ago, it was felt that the physician who did not locate in or very near to a large city became "buried in the country," and unless he was sufficiently progressive to make frequent pilgrimages to a Mecca of learning soon became obsolete in his practice. It is, indeed, pleasing to know that

here in our own state a group of physicians, quite removed from the larger medical centers, have, through coordinated cooperation developed a Medical Study Society, patterned after and apparently functioning as successfully as the medical clubs in teaching centers.

Several months ago the progressive physicians of Fayette, Clayton, Delaware and Buchanan counties developed a plan of organization for a study club in which any member in good standing with his respective county society might obtain membership. It was definitely understood that the new club bore no direct relationships to any county society and should in no way interfere with the activities of the county society. It was further definitely established that members of the club must participate in the preparation and discussion of all club programs, and that each member would assist any other member with advice or counsel upon request. Realizing that the life of such an organization depends upon maintaining a very active membership, their constitution provides that any member absenting himself more than three meetings during the year without good cause becomes automatically expelled, thus making room for the election of a new member.

The club held its first meeting in May of this year and has continued with punctuality to date. Current reports would indicate that the society is eminently successful and that great benefit is being derived by participants in the club's activities. The following lists the subjects and speakers at the meetings held since the new club came into existence: May—"What We Learn from the Arrhythmias," by C. C. Hall, M.D., Maynard; June—"What We Learn from the Ears," by Fred F. Agnew, M.D., of Independence; July—"Hyperthyroidism," by M. E. Kallman, M.D., Elkader; August—"Pulmonary Tuberculosis," by Raymond Grant, M.D., Volga City; September—"Tuberculosis of the Chest from the X-ray Standpoint," by Judd Shellito, M.D., Independence; October—"Anesthesia in Obstetrics," by D. M. Fuiks, M.D., Manchester; and November—"My Medical Experiences in the Samoa Islands," by F. E. Braucht, M.D., of Elkader.

Where within our great state can we find a finer spirit of orderly and purposeful study or a more complete program for medical advancement than that developed by our colleagues in the northeastern section of Iowa. The history of this group indicates that an efficient study club is possible in any community, large or small, where a sincere desire for medical study exists. The success of such a project is dependent solely upon the sincerity and steadfastness of its membership.

NEBRASKA PAPER FEATURES IOWA'S CLEANUP

In the Omaha *World-Herald* of November 15th appears a full page feature article headed, "Rounding Up Medical Quacks in Iowa." The article was prepared by one having access to the confidential files of the Law Enforcement Division of the Iowa Department of Health and accurately deals with the recent activities of this department. It is significant that these law enforcement activities should have been considered of sufficient interest and importance to constitute copy for a full page story in the Nebraska daily. Our sister state evidently approves of our stand on law enforcement and our effort to rid Iowa of the public bloodsucker—the medical quack.

An editorial in the Mason City *Gazette*[1] entitled "Iowa Lures Cancer Quacks," states "Iowa is 'getting played for the sucker' by the cancer cure quacks. Whenever the authorities of another state clamp down on the faker, he invariably makes tracks for this state." If this statement is true one can readily appreciate the attitude of the neighbor state in seeing news in the Iowa cleanup.

With our State Department of Justice cooperating whole-heartedly with the Department of Health's investigators, positive action[2] has been obtained of which we may justly be proud. The record is a good one and we have made and are making rapid strides towards giving the citizens of the state the protection in health matters that their lawmakers provided. Iowa is cleaning up and before long will be definitely off the sucker list of medical quacks.

1. July 6, 1931.
2. See Editorial, November, Journal Iowa State Medical Society.

THE CENTRAL NEUROPSYCHIATRIC HOSPITAL ASSOCIATION

There are probably already too many organizations for physicians and hospitals and too much overlapping of personnel and objective in the groups which already exist. However, the Central Neuropsychiatric Hospital Association would seem to have a definite and legitimate field of endeavor.

The association, made up of private sanatoria located in the middle states, was organized several years ago, has developed gradually and conservatively and now comes into publicity through a series of educational articles being published at intervals in the JOURNAL of the American Medical Association.

Private psychiatric hospitals, heretofore left by the wayside in the standardization program, have now taken it upon themselves to so standardize and regulate their practice that they will fully merit an increasing public confidence.

The organization takes its stand squarely for ethical practice and according to its own pronouncements is ready and willing to carry its share of responsibility for public education in the widening field of psychiatry and mental hygiene.

It is hoped that through this movement great benefits will accrue to the patient, to the physician who must choose a hospital for his neuropsychiatric cases and to the members of the association who are undertaking a considerable responsibility.

MONTHLY OPEN-HOUSE CLINICS AT THE UNIVERSITY HOSPITAL, IOWA CITY

Beginning in December and continuing through May, the Clinical Staff of the College of Medicine will conduct clinics for the doctors of the state on the first Friday of each month, except January when the second Friday, January 8th, will be utilized.

There will be four hours clinic on each of these days, surgical subjects being presented from 10 to 12 A.M., and medical subjects from 1 to 3 P.M. All meetings will be held in the Surgical Amphitheater, Seventh Floor, University Hospital. Special attention will be paid to demonstrating technical procedures although operative clinics as such will not be given. Lunch may be obtained in the Hospital Cafeteria. No programs will be published, and no notice other than this will be given. There will be no formal registration, and the meetings will be made as informal as possible.

THE LESLIE DANA GOLD MEDAL AWARD

The Leslie Dana Gold Medal which is awarded annually for "outstanding achievements in the prevention of blindness and the conservation of vision," was recently presented to Edward M. Van Cleve, of New York City, principal of the New York Institute for the Education of the Blind. Mr. Van Cleve was selected for this honor by the National Society for the Prevention of Blindness in cooperation with the St. Louis Society for the Blind, through which the medal is offered by Leslie Dana.

Mr. Van Cleve played a leading part in the formation in 1915 of the National Society for the Prevention of Blindness, sponsored by the Russell Sage Foundation, and he became its first managing director. After his resignation from this position nine years later, he continued his active interest as a member of the executive committee.

Mr. Van Cleve was one of the men largely responsible for the successful World Conference on Work for the Blind, held in New York City last spring upon the call of President Hoover, which was attended by delegates from thirty-six nations; he represented United States interests at a preliminary meeting in Hamburg, Germany, the preceding year, when the World Conference plans were made. He is a member of the board of trustees of the American Printing House for the Blind, Louisville, Kentucky, and he has served as an officer of various other organizations for the blind.

The Leslie Dana Medal was awarded last year to Dr. George E. de Schweinitz, of Philadelphia, former president of the American Medical Association, of the American Ophthalmological Society, and the College of Physicians of Philadelphia. In 1929 the medal was awarded to the late Dr. Ernest Fuchs, of Vienna, Austria, who was recognized in his profession, for a number of years before his death, as "the world's greatest ophthalmologist."

DR. GRISWOLD GOES TO NEW YORK

Don M. Griswold, M.D., D.P.H., has been provisionally appointed consulting epidemiologist on the staff of the Division of Communicable Diseases of the New York Department of Health.

From 1919 to 1928, Dr. Griswold was professor of hygiene and public health at the University of Iowa. While at the University, Dr. Griswold was granted a year's leave of absence during which he acted as state commissoner of health of Iowa. Since leaving Iowa, Dr. Griswold has been a member of the research staff of the committee on the costs of medical care conducting studies on the economic aspects of medical practice.

Dr. Griswold is author of a textbook for medical students and health officers entitled, "Outline of Epidemiology."

THE CONTROL OF CANNED FOODS

A recent announcement by the Food and Drug Administration, United States Department of Agriculture indicates that in spite of government regulation many still attempt to market canned fruits and vegetables containing adulterations injurious to health. During the past year the department has made 28 seizures totaling more than 7,500 cases of adulterated or misbranded vegetables, followed by citations of the packers to hearings to show why criminal prosecution should not be instituted.

They further indicated that a total of 250 lots of canned and dried vegetables imported to this country were detained because of violation of the food and drugs act.

In summing up the report, however, they state "In general the vast bulk of canned vegetables which annually finds its way to the American table is clean, wholesome, and properly prepared. Regulatory activities of the Department of Agriculture during past years, together with the efforts of most of the canning trade to constantly improve the quality of canned goods, have established the justified confidence of the public in canned foods."

PRESIDENT'S PAGE

Pay your society dues and retain your membership in organized medicine.

Be honest with yourself. There is not one practicing physician who cannot afford to pay one dollar a month society dues. The criticism that has recently developed is not, in reality, on account of the raise in dues. It has come about because some members have thought that your monies have not been wisely expended, that some activities were unnecessary, and because of a more or less general feeling that the direction of all affairs was in the hands of a very few.

The state society is governed by a delegate system. This means that you, as an individual member, have the right to attend the annual session, take part in the scientific work and social functions, receive all the publications and participate in the benefits of the society's activities. It does not mean that you have the power to vote or to take part in the legislative affairs. These duties are vested in and belong to the delegates selected for these purposes by the county societies.

Dr. N. S. Davis, of Chicago, who was regarded as the father of our present-day methods of procedure, wrote: "By providing for delegates from the local societies, on a uniform basis of representation, and placing the whole business management of the association in the hands of such delegates, by restricting to them the right of voting, the most reliable check is put upon the tendency to centralization or local control, or any form of class supremacy, while the door to permanent membership is open to all who are willing to support the interests of the profession in their own districts."

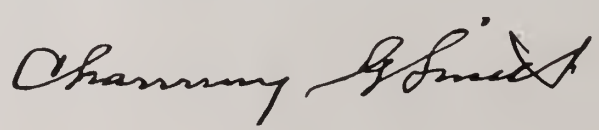
Should you have a grievance and be thinking of dropping out, consider it carefully. Your act will harm not only yourself, but the whole profession. Remember that your annual state society obligation will automatically revert to $7.50 unless some action otherwise is taken by the next House of Delegates.

The JOURNAL has recently printed a series of editorials telling of the state society activities and expenditures. Also there have appeared resolutions passed by county societies taking exception to the present activities, expenditures, management, and so forth.

The only way in which you, as an individual physician, can correct any abuse, is to stay in organized medicine. Think all these things over. Talk about them in your county society and see to it that your delegate is instructed according to the wishes of the majority of your members.

The House of Delegates, meeting next May, will also consider these problems and will proceed, without malice, to do the things that are for the good of the profession and the people of the state. In all probability their judgment will be the correct one. I, for one, am very willing to abide by any decision that they may make.

I can promise you that not one member of your state officiary has any desire whatsoever to conduct the state affairs contrary to the wishes of the majority.



A New Speakers Bureau Activity

Radio Broadcasting

The Speakers Bureau of the Iowa State Medical Society has accepted the invitation of Radio Station WOI, at Ames, to broadcast educational health talks. There is to be a series of twelve fifteen-minute talks, prepared by members of the State Society, once a week, beginning Thursday, December 10, at 1:00 p. m. The following program has been outlined:

December 10—The Doctor.

December 17—The Specialist.

December 24—Fighters of Disease.

December 31—Medical Achievements in the United States in the Past Fifty Years.

January 7—Preventable Diseases.

January 14—Preventable Diseases.

January 21—Cancer.

January 28—Rheumatism.

February 4—Venereal Diseases.

February 11—Tuberculosis.

February 18—Crippled Children.

February 25—Periodic Health Examinations.

Every member of the society is urged to give all possible publicity to these talks and to tune in on them. The Bureau needs your criticisms for future guidance. Radio broadcasting is the modern medium for educational projects and the State Society is fortunate in securing this excellent opportunity to disseminate health information.

THE OPEN FORUM

MEDICAL LEGISLATION APPROVED

Garrison Iowa
November 15, 1931

Editor,
The Journal of the Iowa State Medical Society,
Des Moines, Iowa.
Dear Sir:

I see by the last issue that some county societies have passed resolutions against the society hiring Vernon D. Blank, as managing director. I, for one, wish to express my thanks to him and his work for the medical legislation that was put through the last assembly and some of the bills that were defeated through his efforts and knowledge, which took over two years (I know of) for him to get acquainted with the work and means to get these legislative benefits to the profession at large. I happen to know how the osteopath and chiropractic bills were put through the Nebraska legislature, as my father was a member of both houses in Nebraska when these respective bills came up, and I also know that organized medicine was inactive in working against these bills then.

I make the suggestion that the State Society open up an "Open Forum" column in the JOURNAL so that the M.D.'s who wish to, can express themselves on economic questions. Maybe Blank is receiving too big a salary. What it is I do not know. I agree with the resolutions that were passed by the Monroe County Medical Society that the dues increase is too high and there are a great many doctors who will not join for that reason. I know of several already who have expressed themselves as not continuing next year on account of these high dues. Let us make the medical society a protective organization for physicians, through which we can fight from within to better our own economic condition, because if we do not, we will have State Medicine upon us before we know it.

I thank you.

Sincerely yours,
E. L. MEREDITH, M.D.

RESOLUTIONS PASSED BY WEBSTER COUNTY MEDICAL SOCIETY AT MEETING OF THE SOCIETY ON NOV. 17, 1931

WHEREAS, The officers of the Iowa State Medical Society and its Committees are giving freely of their time and sacrificing income in order to correct evils heaped upon the Society by previous inefficient and lethargic mal-administrations; and,

WHEREAS, The deficit incurred by the Iowa State Medical Society in 1930 depended primarily on unusual expenditures authorized by the House of Delegates and not on the salary of the Managing Director and expenses of the Central Office; and,

WHEREAS, A Managing Director (either layman or Doctor of Medicine) is indispensable in carrying on the ever-increasing and necessary activities of the Iowa State Medical Society and the present salary paid him is less per capita than is paid by some State Societies for a similar Director; and,

WHEREAS, The method of election of officers is a minor factor and does not deserve special attention; and,

WHEREAS, The increase of dues is not only necessary but justifiable since it is known that one cult pays state dues of twenty-five dollars, district dues of ten dollars and national dues of five dollars in addition to special assessments in legislative years and another cult is reported to have yearly dues of one hundred dollars; and,

WHEREAS, It is necessary to give adequate and active support to the state organization and its Legislative Committee so that cults will fail in passing legislation detrimental to the laity and fail likewise in the establishment of more numerous schools for irregular practitioners; and,

WHEREAS, Membership in the Iowa State Medical Society gives each member service and satisfaction which could not be purchased at many times the present dues; therefore,

BE IT RESOLVED, By the Webster County Medical Society that

(1) We approve the principles of the activities of the Iowa State Medical Society sincerely administrated by its officers and committees; and,

(2) We endorse the House of Delegates and the Board of Trustees in their action of engaging a Managing Director for the Society, which office we believe is indispensable to a successful state organization; and,

(3) We endorse the necessary increase in dues and look upon them as reasonable; and,

(4) We believe the present system of election of officers is satisfactory, since each County Society has representation.

BE IT FURTHER RESOLVED, That a copy of these resolutions be sent to each component County Society of the Iowa State Medical Society and that a copy be sent to the JOURNAL of the Iowa State Medical Society for publication.

OBSERVATIONS ON BLOOD PRESSURE

To the Editor:

I wrote you concerning a reprint from the Archives of Internal Medicine, June, 1931, "Effect of Intrathoracic Pressure on Arterial Tension." The author is Eli Grimes, M.D., Des Moines. I deplored the fact that the majority of regular practitioners in Iowa would necessarily be deprived of the vital points in physiology so ably set forth, and so well substantiated by the author. This deprivation occurs because of the exclusive publication of such scientific papers in strictly scientific journals and which are not read by "the rank and file" of physicians throughout the state. I suggested your asking

Dr. Grimes to give you an epitome or resumé of this paper.

In your reply you asked me to make an abstract and submit the same. I feel that my condensation would hardly give the matter what it deserves because the author's deductions and practical applications are founded upon experiments and observations he began in 1910 and which he has checked up twenty years thereafter.

Coincident with our fight with the cults, there seems to be awakened among physicians throughout the state a sincere desire and effort to slough off their ignorance in the fundamentals of true medicine, and ignorance of the wonderful advances made in recent years. We have many of us taken advantage of the Extension Courses of the University of Iowa. Perhaps this is conscience. Perhaps we would like to see a wider gap between cultism and regular medicine. Perhaps it is not politics, but principle. Whatever it is, there is a tendency toward brushing up. If we denounce the ignorance and impostures of our benighted brothers (bar sinister), we want to do so honestly and give the public what we claim to have.

"The intrathoracic pressure is a natural accompaniment of hard thoracic effort. When a heavy weight is lifted, a heavy blow is struck, or a maximum muscular effort of any kind is made, the breath is forcibly held to a point of getting 'black in the face.' This getting 'black in the face' is due to the fact that the increased thoracic pressure prevents the return of blood to the chest. The amount of blood is less than that required for hard muscular work if the breath is held reflexly. Observe a man carrying a heavy weight up a flight of steps; note the infrequency of respirations; his cyanosis and his distended veins; it is evident that he is using more blood than is contained in his chest, or that it returns against the great intrathoracic pressure. This being the case, there must be an extra thoracic supply of blood, and it can come only from the great vessels of the abdomen. Otherwise there would be sudden shutting off of blood reaching the heart, and prolonged maximum muscular effort would be impossible."

There then follows an explanation of how it is that intra-abdominal pressure remains above, or at the level of, intrathoracic pressure, which accounts for an adequate supply of blood to the heart during effort. He explains how it is that during muscular effort the blood is held back in the great veins from the heart and that on cessation of muscular effort, and the consequent rapid and deep respirations, the dam, so to speak, breaks, and the blood suddenly overfills the heart and the arteries, and the blood pressure is raised considerably, and in patients ordinarily running high blood pressure, the arterial tension is raised enormously and if the arteries are seriously impaired, *enormously* and *dangerously*. Contrary to the general idea, during muscular effort, when the patient is deeply cyanosed, the arterial tension is about zero, and there is no strain whatever on the arteries and although the patient *looks* as if he were going to burst a blood-vessel, he is in no danger whatever of such an accident, because the minute he relaxes there is a crimson tide of great force and magnitude to the heart and arterial system, distending both and threatening the integrity of the arteries, particularly in the branch of the middle cerebral. When the patient is "black in the face" there is no danger of apoplexy. When he starts to clear up, under relaxation and deep respiration, the danger is imminent in any person having "bad arteries" (or bad rubber, as Osler used to say). The increase in arterial tension above the systolic pressure ordinarily carried by the individual is, on cessation from effort, a test proposed by the author to judge of the condition of the arteries.

An individual known to have bad arteries, or even an individual suspected of having bad arteries, should be warned not to indulge in great muscular effort where the breath is held; and in case the effort is necessary, to try and relax slowly and not breathe deeply for a time, so that the rebound from a comparatively empty heart and arteries to an overfilled heart and arteries will be slow, and the return from a zero systolic to a greatly increased arterial tension will not be sudden. It may be by impressing this on patients, that you will avert the catastrophe of cerebral hemorrhage. To illustrate this point, I will close by quoting again from the paper: "I observed a man carry his wife, who had been injured in the street, up a flight of steps into the house and lay her on a couch. It was a terrific effort, as the wife weighed 160 pounds. After placing her on the couch, he took a few deep breaths, and had a sudden fatal stroke of apoplexy."

Frank S. Hough, M.D.,
Sibley, Iowa.

SIGMUND FREUD'S 75th BIRTHDAY

Professor Sigmund Freud of Vienna recently celebrated his 75th birthday. It is significant that the Vienna Medical Society, which refused him membership years ago and which has consistently refused to accept hi work in psychoanalysis, this year granted him honorary membership in that society. At various points in both Europe and the United States Professor Freud's birthday has been an occasion of celebration. While psychiatrists and psychologists have been greatly divided relative to the accuracy of Dr. Freud's observations, they appear to be in one accord relative to the usefulness of his theories and the stimulation which his work has given the analytic study in problems of normal and abnormal mental physiology.

It is further fitting that in the year of his 75th birthday, the accomplishments of Professor Freud should have been recorded in book form by the eminent Dr. Fritz Wittels under the title of, "Freud and His Time".

County Society Officers Conferences Held in Councilor Districts

The 1931 conference of county society officers was held in a series of councilor district meetings instead of in Des Moines as in the past; and the remarkable attendance at these conferences, as well as the resultant interest and activity, proved the plan highly successful. Secretary Parker proposed the district conferences as a means of promoting freer and more practical discussions of matters of common and local interest and the trustees approved the plan since it would greatly reduce the cost of the annual conference. Despite the fact that 245 county society officers, representing 87 county societies, attended the eleven councilor district conferences, the total cost to the Iowa State Medical Society was only $207, as compared with the $1,558 cost of the largest previous conference, that of 1929, when 106 county society officers represented 73 counties.

It is a noteworthy fact that of the 97 component county societies, 87 were represented at the various conferences, but still more significant was the active and general participation by all present in the discussions of state and county medical society activities. In several districts consideration was given to the formation of councilor district societies which are made practicable by the new division of the state into compact councilor districts. In the tenth district a society has already been organized, with councilor Dr. J. G. Macrae as president and Dr. John C. Parsons, of Creston, as secretary. In the fifth district it was voted to organize a society and a committee has been appointed for that purpose.

Except in the eighth district, where councilor Dr. C. A. Boice conducted two conferences, one in Muscatine and the other in Mount Pleasant, the program of the conferences was practically the same, consisting of a presentation of state society activities, expenditures and future program by various officers of the state society, followed by free discussion of these subjects and numerous local problems. In each case Dr. Parker pointed out that in future conferences the ideal would be to devote the entire time to a consideration of local questions of medical organization and medical economics, which would be made the more feasible by the fact that such meetings are held in small, compact groups.

In every case except two conferences (in the tenth and eleventh districts) from which the president was unavoidably absent, the program of state society affairs was presented by president Dr. Channing G. Smith, secretary Dr. Robert L. Parker, councilor chairman Dr. L. R. Woodward, and the managing director, Mr. Vernon Blank. Present at several of these sessions were also the chairman of the Board of Trustees, Dr. Oliver J. Fay, the chairman of the legislative committee, Dr. T. A. Burcham, and councilors Dr. C. A. Boice, Dr. W. L. Hearst and Dr. A. V. Hennessy. In each case the councilor presided over the conference in his district. A brief resumé of the various conferences is given below:

District One

At Calmar, on November 19th, twenty-three county society officers, representing every component society in the district, met at the Calmar Hotel for an all-afternoon conference. Councilor Dr. Felix A. Hennessy presided and at the end of the session a resolution endorsing all the activities of the state society was unanimously adopted.

District Two

At Mason City, on November 19th, twenty county society officers, representing eight component societies, met at the Hotel Hanford. Councilor Dr. L. R. Woodward presided and in the course of the discussion there was an expression of general approval of the activities of the state society and the increase in dues.

District Three

At Spencer, on September 24th, twenty-four officers, representing nine component societies, met at the Hotel Tangney, with councilor Dr. F. P. Winkler presiding. At the end of the discussion a resolution was unanimously adopted, endorsing the program and policies of the state society and expressing appreciation of the work done by the legislative committee and officers of the state society.

District Four

At Ida Grove, on September 24th, twenty-eight county society officers, representing eight counties of the district, met at the Baxter Hotel. Councilor Dr. William Jepson presided. Resolutions were adopted expressing a deep interest in all the activities of the profession and its co-associate, the department of health, and hearty support of any aid which the state society may render in the prevention of disease, the promotion of health and the dissemination of knowledge concerning various specific conditions. Individual comments by those present were unanimous in support of present state society undertakings.

District Five

At Boone, on October 8th, twenty-five county society officers, representing eight counties, met at the Holst Hotel, with councilor Dr. W. W. Pearson presiding. A resolution was adopted endorsing the past activities of the state society and advising the continuation of the contemplated activities in the future.

District Six

At Toledo, on October 29th, twenty-five county society officers, representing eight component societies, met at the Anderson Tea Room, with councilor

Dr. W. L. Hearst presiding. A resolution was adopted endorsing the state society program and activities.

District Seven

At Anamosa, on October 29th, twenty-two officers, representing seven county societies, met at the Gillen Hotel, with councilor Dr. Arthur W. Erskine presiding. This district likewise endorsed, upon motion, the program and activities of the state society.

District Eight

At the two eighth district meetings, held at Muscatine and Mount Pleasant, the nine counties of the district were represented, and all expressed satisfaction with the present program of the state society, and approval of legislative activities.

District Nine

At Ottumwa, on November 5th, thirty-eight officers of the nine component societies of the ninth district met at the Y. W. C. A., with councilor Dr. H. A. Spilman presiding. A resolution was adopted approving the state society program.

District Ten

At Creston, on September 10th, sixteen county society officers, representing seven counties of the district, met at the Iowana Hotel, with councilor Dr. J. G. Macrae presiding. A resolution was adopted by those present, endorsing the program and activities of the state society.

District Eleven

At Council Bluffs, on September 10th, twelve officers, from five counties of the district, met at the Hotel Chieftain. Councilor Dr. A. V. Hennessy presided and an expression of satisfaction in the activities of the state society was unanimous.

SOCIETY PROCEEDINGS

Carroll County

The November meeting of the Carroll County Medical Society was held Thursday, November 5, in the staff room of St. Anthony's Hospital, with dinner at six-thirty, followed immediately by the scientific program. There were about twenty-five doctors present. Walter F. Harriman, M.D., from Sioux City, gave a talk on Surgical Emergencies in Obstetrics, which was very widely and thoroughly discussed by every man present, forming a sort of old fashioned prayer meeting in its character. At the election of officers, all of the officers were held over for the following year; and an official O. K. was given the raise of dues to the State Society to twelve dollars, the unanimous opinion being that we had received more than twelve dollars worth of good in the twelve months just past.

Walter A. Anneberg, M.D., Secretary.

Cerro Gordo County

The Cerro Gordo County Medical Society held its regular meeting in the Hi-Y room of the Y. M. C. A. Tuesday evening, November 17, following a six-thirty dinner. Bert E. Hempstead, M.D., of the ear, nose and throat department of the Mayo Clinic, gave a paper on Conditions of the Ear, Nose and Throat from the Practitioner's Standpoint. This was discussed by Drs. Carlson, O'Brien, Fallows, Wurtzer and Woodward.

T. E. Davidson, M.D., Secretary.

Fayette County

The Fayette County Medical Society met at Oelwein, Tuesday, November 3, when a lung and heart clinic was held at Mercy Hospital in the afternoon. Following a six o'clock dinner, the clinicians, John H. Peck, M.D., of Des Moines, and Daniel J. Glomset, M.D., also of Des Moines, addressed the group on Essentials in Tuberculosis Treatment, and Congestive Heart Failure, respectively.

Harrison County

Robert L. Parker, M.D., spoke before the Harrison County Medical Society, Friday, November 6, in Missouri Valley, on the need of organizing health units and the coordination of these units into a state-wide defense against disease. The county health unit involving the employment of a full-time social worker or county nurse was discussed and thoroughly approved.

Iowa County Annual Meeting

At the annual meeting of the Iowa County Medical Society, held at Marengo, Tuesday, October 27, Dr. L. A. Miller, of North English, was chosen to head the organization. The new vice president is Dr. Fred Sternagel, of Williamsburg, and Dr. Irwin J. Sinn, also of Williamsburg, will continue as secretary and treasurer. The scientific program presented at this meeting consisted of two papers: A Useful Fracture Bed, Charles F. Noe, M.D., of Amana, and Fractures of the Lower Extremities, Howard L. Beye, M.D., of Iowa City.

Johnson County

Members of the Johnson County Medical Society were guests of Dr. Edwards, the Board of Control and the Sanatorium staff, when that organization met Wednesday, November 4, at the Oakdale Sanatorium. John H. Peck, M.D., of Des Moines, spoke on Rational Tuberculosis Therapy, and Channing G. Smith, M.D.,

of Granger, talked on The Activities of the State Society.

Jones County Meetings

On Friday, October 9, the Jones County Medical Society held a very interesting chest clinic at Anamosa, Iowa. Thirty doctors attended and many interesting heart and lung cases were examined. Dr. Peck and Dr. Spear examined and discussed the lung cases and Dr. Rathe the heart cases. Dinner was served at the Gillen Hotel and the visiting doctors were guests of the Jones County Medical Society. Dr. C. R. Smith, president, presided and the program consisted of three papers presented by the visiting clinicians: The Management of Heart Cases, H. W. Rathe, M.D., of Iowa City; Rational Therapy in Tuberculosis, John H. Peck, M.D., of Des Moines; and Diagnosis of Tuberculosis, William M. Spear, M.D., of Oakdale. These papers were discussed by the members. The evening program was the consummation of a very interesting program and the Jones County Medical Society feels grateful to these physicians for the fine clinic.

On Thursday, October 29, the officers of nine medical societies in this district met with the state officers at Anamosa. Following a twelve-thirty dinner, our president, Dr. Channing G. Smith, spoke about the objectives of our state society. Dr. Robert L. Parker, state secretary, talked on the management of our state society, stressing the necessity of raising our yearly dues in order to cancel the present depletion. Vernon D. Blank spoke of the legislative program. Thirty county officers attended this meeting and the consensus of opinion favors the present program of our state society.

H. F. Dolan, M.D., Secretary.

Linn County

The regular meeting of the Linn County Medical Society was held Thursday, November 12, and the principal speaker of the evening was Sanford R. Gifford, M.D., professor of ophthalmology, Northwestern University, who talked on Ocular Ailments in the Elderly Patient. His paper was discussed by Cecil S. O'Brien, M.D., Iowa City; J. E. Stansbury, M.D., Cedar Rapids; George A. Albright, M. D., Iowa City, and W. F. Boiler, M.D., Iowa City. Fred W. Bailey, M.D., of Cedar Rapids, presented a Preliminary Report of Stone in Tonsil. Its pathologic aspect was discussed by H. L. VanWinkle, M.D., Cedar Rapids, and W. J. Foster, M.D., Cedar Rapids.

T. F. Hersch, M.D., Secretary.

Marshall County

Fifty-nine members and guests of the Marshall County Medical Society met for an evening meeting at the Hotel Tallcorn, Tuesday, November 3, in Marshalltown. After a six-thirty dinner, the two following scientific papers were presented: Intestinal Obstruction, Charles W. Mayo, M.D., of the Mayo Clinic, Rochester, and Gastro-Intestinal Hemorrhages, J. M. Berkman, M.D., also of the Mayo Clinic. Both doctors used lantern slides and blackboard illustrations to bring out points in their lectures.

Palo Alto County

Friday, October 23, the Palo Alto County Medical Society held a meeting in Emmetsburg, at which John H. Peck, M.D., and Daniel J. Glomset, M.D., of Des Moines, held a clinic in the afternoon, presented addresses at the dinner hour and later in the evening spoke before an audience of laymen. The clinic was especially instructive and profitable since all the doctors of Palo Alto county were present except two. The Palo Alto Society always appreciates the advent of these special clinicians into our activities.

Harold L. Brereton, M.D., Secretary.

Polk County

The Des Moines Academy of Medicine and Polk County Medical Society met in regular session Tuesday, November 24, at the Fort Des Moines Hotel. Ninety-four members and guests were in attendance. The scientific program was a Symposium on Pediatrics. The essayists were Arnold M. Smythe, M.D., who read a paper on Whooping Cough; Adah L. Hershey, R.N., who spoke on Well Baby Clinics; Dennis H. Kelly, M.D., who gave a lecture on The Diagnosis and Treatment of Measles, which was illustrated by statistical diagrams, and James E. Dyson, M.D., who lectured on The Diagnosis and Treatment of Poliomyelitis. The subjects were discussed by Fred Moore, M.D., and Lee Forrest Hill, M.D.

Following the scientific program, coffee, cider and doughnuts were served, and many remained to play cards and visit.

Pottawattamie County

William W. Duke, M.D., of Kansas City, Missouri, delivered the scientific address Thursday afternoon November 5, when the Pottawattamie County Medical Society met in Council Bluffs. Dr. Duke spoke on Allergy as Related to the General Practice of Medicine.

Scott County Annual Meeting

Dr. Raymond E. Peck was elected president of the Scott County Medical Society at the annual meeting held Tuesday, November 3. Other officers are: Dr. Sidney G. Hands, vice president; Dr. Henry E. Meyers, secretary, and Dr. L. A. Block, treasurer; Dr. John I. Marker, delegate, and Dr. William Goenne, alternate.

Tama County

A. A. Pace, M.D., of Toledo, furnished the scientific program for the Tama County Medical Society when that organization met in Dysart, Friday, October 9. Dr. Pace presented a paper on Infantile Paralysis.

Webster County

The regular November meeting of Webster County Medical Society was held on Tuesday evening, November 24, at St. Joseph's Mercy Hospital. The speaker of the evening was J. A. Myers, M.D., associate professor of preventive medicine at the University of Minnesota. Dr. Myers gave a most interesting and markedly well worth while paper on Tuberculosis, discussing phases in diagnosis and prognosis and using lantern slides to bring out the points of interest in his paper.

John C. Shrader, M.D., Secretary.

Woodbury County

Monday evening, November 9, the regular meeting of the Woodbury County Medical Society was held at the Martin Hotel. Following a six-thirty dinner, J. A. Myers, M.D., associate professor of preventive medicine at the University of Minnesota, delivered a lecture on Bovine Tuberculosis.

Four County District Society

The Four County District Society which is composed of physicians in Buena Vista, Cherokee, Ida and Plymouth counties, met in Cherokee, Thursday, November 19. The speaker of the evening was William L. Shearer, M.D., professor of surgery in the University of Nebraska College of Medicine, who took for his topic, Pathological Problems of the Jaws and Associated Sinuses of the Mouth and Nasal Cavity in Their Relationship to Remote Diseases. At the business session, officers for 1932 were elected as follows: Dr. C. H. Johnson, of Cherokee, president; Dr. M. J. Joynt, of LeMars, vice president; Dr. J. H. Wise, of Cherokee, secretary and treasurer.

Northwest Iowa Medical Society

The regular fall meeting of the Northwest Iowa Medical Society was held Tuesday, October 27, in Sheldon. After the six-thirty dinner, the following program was presented: Coronary Thrombosis with Myocardial Infarction and Cardiac Hypertrophy in Young Individuals, Harry L. Smith, M.D., of the Mayo Clinic, Rochester; Presentation of Medical Legislation as Introduced in the Forty-fourth General Assembly, Hon. Oliver J. Ditto, representative from Osceola county; Legislative and Political Report, Iowa State Medical Society, Channing G. Smith, M.D., and Mr. Vernon D. Blank. Dr. A. P. Stewart, of Inwood, was named president for the coming year; Dr. G. H. Boetel, of Rock Rapids, vice president; Dr. Frank P. Winkler, of Sibley, secretary, and Dr. L. L. Corcoran, of Rock Rapids, treasurer.

Sioux Valley Eye and Ear Academy

The meeting of the Sioux Valley Eye and Ear Academy at Omaha, November 18, was outstanding in the matter of attendance and program presented. In spite of the present depression and the lack of attendance experienced at other medical meetings this year, the Academy had the largest attendance in the history of the organization. The conference period of this program was very successful, many interesting reports were presented and all enthusiastically discussed. It was decided to continue these conferences. Case reports were presented as follows: The Use of Sulzberger's Iodine Powder, J. Calvin Davis, M.D., Omaha; Congenital Occlusion of the Posterior Nares, Royal F. French, M.D., Marshalltown; Ludwig's Angina, Samuel A. Kellar, M.D., Sioux Falls; Ligation of the Carotid Artery to Control Nasal Epistaxis, L. G. Howard, M.D., Council Bluffs; Chronic Maxillary Sinusitis, John B. Potts, M.D., Omaha; Infection with Sporothrix, Court R. Stanley, M.D., Worthington, Minnesota, and Post Tonsillitis—Post Quinsy Septicemia, T. R. Gittins, M.D., Sioux City.

The meeting was concluded with a banquet at the Omaha Club at which time an added attraction was offered by Dr. F. W. Dean, of Council Bluffs, who gave us an interesting address on The European Experiences of American Medical Students. The election of officers for the ensuing year resulted in Dr. J. B. Gregg, of Sioux Falls, being named president; Dr. C. L. Chambers, of Des Moines, vice president, and Dr. F. H. Roost, of Sioux City, being re-elected secretary and treasurer.

F. H. Roost, M.D., Secretary.

Tri-County Medical Society

On Friday evening, November 6, at the Leggett Hotel in Fairfield, the Tri-County Medical Society, composed of Henry, Jefferson and Washington counties, held its third meeting of the year. The speakers were J. F. Weir, M.D., and W. McK. Craig, M.D., both of the Mayo Clinic, Rochester. Dr. Weir spoke on Early Diagnosis of Carcinoma of the Stomach, and Dr. Craig delivered a paper on Traumatic Head Injuries. About forty doctors were in attendance. Officers elected for 1932 are: Dr. E. E. Stutsman, of Washington, president; Dr. J. S. Gaumer, of Fairfield, vice president, and Dr. J. W. Laird, of Mt. Pleasant, secretary.

AUXILIARY NEWS

We regret to announce that Mrs. Walter Jackson Freeman, our national president-elect, is yet detained in Europe by the illness of her son. His convalescence is slow though apparently definite. Mrs. Freeman's return is uncertain though hoped for before the end of the year.

Here are two gift suggestions: Plan to use subscriptions to *Hygeia* as Christmas gifts. Send to *Hygeia* publishers, lists of heads of families of children where *Hygeia* is not taken but where it might be taken and appreciated.

The Woman's Auxiliary to the Kentucky State Medical Association is receiving deserved praise from the State Board of Health for important services.

All who have received the November Bulletin of the Kentucky State Board of Health are impressed with the successful way in which the important information is presented to the reader. In the foreword this sentence appears: "The State Board of Health desires to express its gratitude to the Woman's Auxiliary to the Kentucky State Medical Association for the splendid way in which this work has been accomplished." The "question and answer" form in which this information is assembled makes it easy to read and easy to understand. Such joint work of state boards of health and woman's auxiliaries to State Medical Associations opens up new spheres of helpfulness to auxiliaries. This Kentucky bulletin is devoted to the medical and health laws of Kentucky and to the United States Public Health Service as it applies to that state, and is designed especially for all Kentucky state schools and colleges. It is surely highly valuable as well to all citizens.

In Kansas the press and publicity chairman, Mrs. J. T. Hunter, is asking all auxiliaries to look over their records and refresh their memories of past activities, and report not only present proceedings, but all interesting plans and activities engaging any of the auxiliaries in the past. It is believed valuable results may issue from these exchanges of experiences and ideas.

The new president of the Pennsylvania Auxiliary, Mrs. C. R. Phillips, makes a fine appeal for cooperation and brings to mind this good-for-us-all quotation:

"Think not that a leader can alone achieve,
She needs the help of others who believe
The cause is just.
It matters not where praises are bestowed;
It matters much that others share the load,
Women who gladly give their strength and hours,
Who sacrifice themselves and all their powers."

Last summer's philanthropic work of the Dauphin County, Pennsylvania, Auxiliary was outstanding. You would say that its welfare committee took no vacation; for during the twelve weeks of the Christmas Seal Camp, provided by the Tuberculosis Society for 66 children, this committee took care of the sewing and mending for those children, provided all the jellies and six dozen cakes weekly, and several treats of ice cream and candy; provided 50 pairs of blunt scissors for the children's use; donated a book case for the recreation hall, and arranged weekly entertainments for the children. This was certainly very fine auxiliary care for tuberculous children.

There is fine and heartening news from Louisiana regarding the auxiliary organization work in that state. The goal is to have the state 100 per cent organized this year. You may be sure that goal will be reached when you know that the president of the Louisiana State Medical Society, Dr. S. C. Barrow, is earnestly cooperating to secure this 100 per cent organization. Wherever medical societies and associations give active encouragement to the formation of auxiliaries, organization will go forward rapidly.

This November New Orleans is entertaining the Southern Medical Association and its auxiliary. In May that city will be host to the State Medical Society and auxiliary, and to the American Medical Association and its auxiliary. Thus is the tradition of southern hospitality maintained and justified.

Mrs. A. B. McGlothlan, in October, made an eighteen days' trip through the western and northwestern states following an itinerary mapped out by the national chairman of organization, Mrs. James Blake, first vice president. Discovery of fine work in many states and giving inspiration to more everywhere were incidents of this tour. For example, in Colorado the education envelopes of the auxiliary are provided for the State University Extension service, and the State Traveling Library service, and for all auxiliary county chairmen. Mrs. McGlothlan found enthusiasm and good work in Oregon and the heartiest cooperation from the State Medical Association. The state meetings were held in Eugene, Oregon, and the State Parent-Teacher Association was holding its convention at the same time in the same city. Mrs. McGlothlan was invited to speak before the latter organization. She did this with fine reaction from that parent-teacher meeting. Not only was she the principal speaker at the State Auxiliary Convention, but was also asked to speak to the State Medical Association on two different occasions. The following extract is from the resolutions passed by the House of Delegates of the Oregon State Medical Society, October 24, 1931:

Whereas, The Woman's Auxiliary has made notable progress during the past year in organizing the wives of physicians and interesting them in the dissemination of sound health information to the lay public, particularly in their various local clubs; and

Whereas, The aid of the auxiliary is indispensable in the promulgation of such knowledge and assisting the medical profession in the work of educating lay people to the great truths of scientific medicine;

Therefore, Be It Resolved, That the House of Delegates of the Oregon State Medical Society express to the Woman's Auxiliary its deep appreciation of their invaluable services and pledge its whole-hearted support to their future program.

INTERESTING NEWS

In Brief

A plan whereby disabled war veterans would be treated in civilian hospitals, the expenses to be defrayed by a federal grant, was discussed at a conference of the American Medical Association, the American Hospital Association and the American Legion in Indianapolis, on November 17th. The pro-

posed plan would supplant the present legion hospitalization program. Representatives of the medical association said the major part of hospitals of communities, churches and industrial associations have vacant beds, and that utilization of these facilities would forego necessity of further extensive government building.

Dr. Allen B. Knavel, president of the American College of Surgeons, is quoted as having advocated abandonment of the medical profession's ethical code which bans medical advertising. In his address before the recent session he stated: "We must realize the distinction between advertising for personal and selfish ends and that for the education and welfare of our people."

Radio was recently employed to direct the medical care of a sailor injured during a storm at sea. Dr. T. H. B. Anderson, superintendent of the New Orleans Marine Hospital, used this modern means of communication to direct the splinting of a fractured pelvis, the patient being on an oil tanker well out in the Gulf of Mexico.

During the last fiscal year a total of $52,500,000 was given away by 122 leading American foundations. Forty-two foundations are listed in the field of medicine and public health. These gave away $18,600,000. General education comes next in disbursements with a total of $14,000,000 distributed by forty-six foundations.

A new program for the education of the expectant mother and the care of the child presented by Dr. Clara E. Hayes, director of the Bureau of Maternal and Child Hygiene of Iowa, at the regular meeting of the Des Moines County Medical Society at Mercy Hospital, November 10th, was approved by the society.

The first Full Time County Health Unit in the United States was organized during the year of 1911. On January 1, 1931, 557 counties in the United States had been organized on this basis. These 557 counties represent 28.27 per cent of the total rural population of the United States.

As a part of its economy program to reduce taxes the Kossuth county board of supervisors has suggested to the county doctors that they reduce their fees for attendance upon the poor to 50 per cent of the schedule adopted during the wartime peak of 1920.

A survey conducted by the Iowa State Board of Health indicates that during the last five years one out of every eighteen children born in this state died before reaching its first birthday.

PERSONAL MENTION

Dr. Lawrence E. Pierson, of Sioux City, recently made a trip to Chicago to address the Chicago Urological Society on the subject of "Renal Fibrolipomatosis."

Dr. H. R. Powers, of Emmetsburg, following a serious illness, is leaving home for a few months' stay in California. He will be accompanied by his wife. During his absence, his practice will be cared for by Dr. Cox of Chicago, who recently served a locum tenens for Dr. H. F. Givens of West Bend.

Dr. Anatole Kolodny, of Sioux City, was one of the speakers at the annual meeting of the Kansas City Academy of Medicine held in Kansas City, Missouri. His subject was "Tumors of the Bone."

Dr. George Scanlan was appointed city health physician of DeWitt, to fill the vacancy created by the death of Dr. M. R. Waggoner.

Dr. Jennings Crawford, of Cedar Rapids, attended the convention of the Association of Life Insurance Medical Directors of America, which was held recently in Hartford, Connecticut. Dr. Crawford is medical director of the Cedar Rapids Life Insurance Company.

Dr. W. B. Lewis, of Webster City, addressed the local Kiwanis Club, October 29, on the subject of "Sterilization of Mentally Unfit Persons."

Dr. E. B. Woods, formerly of Valley Junction, has accepted a position in the State University of Iowa as instructor and research assistant in the maternity department under the direction of Drs. Plass and Von Graff.

Dr. C. M. Coldren, of Milford, has announced that he has formed a partnership with Dr. E. J. Johnson of Kanawha, who arrived last month to take up his new duties.

Dr. A. V. Hennessy, of Council Bluffs, has just been appointed associate professor of clinical surgery at Creighton University School of Medicine, according to an announcement made recently by the dean.

Dr. M. L. Spain has opened offices in Davenport, specializing in the treatment of eye, ear, nose and throat diseases, and is associated with Drs. White, Senty and Garside in the Central Clinic.

Dr. C. W. Howell, of Grinnell, spoke before the Parent-Teachers Association of that city, Wednesday, November 18, on the subject of "Child Welfare."

Dr. L. M. Martin has returned to Fort Dodge from Rochester, where he attended a meeting of former

internes of St. Mary's Hospital at the Mayo Clinic. Dr. Martin was the second interne to serve at that hospital, Dr. E. Starr Judd being the first.

Dr. William Jepson, of Sioux City, was the speaker of the evening at the Cherokee Chamber of Commerce and Farmer banquet held in Cherokee, Tuesday, November 17, presenting an illustrated lecture on "Our Unseen Enemies."

Dr. J. A. Thomson, of Sioux City, has been appointed to the Woodbury County Board of Health, succeeding the late Dr. R. F. Bellaire.

Dr. J. F. Morse, of Nevada, medical superintendent of the Iowa Sanitarium will deliver a radio talk on "Checking the Ravages of Disease That Follow Unemployment," over Radio Station WOI.

Dr. J. F. Aldrich, of Shenandoah, has returned home from St. Louis where he has been attending the Forty-Ninth Annual Meeting of the Wabash Railway Surgical Society. Dr. Aldrich was on the program, presenting a paper on "Railway Sanitation."

Drs. G. R. Johnson and **F. L. Nelson**, of Ottumwa, delivered radio talks over Radio Station WIAS recently as a part of the Y. M. C. A. health program.

Dr. W. S. Petty, of Sioux City, addressed the health education class of the Sioux City Women's Club, taking as his topic, "The Part which the Local, County and State Health Departments Play in the Drama of Life."

Dr. R. J. Peterson is returning to Kanawha, after an absence of several months.

Dr. E. C. Montgomery, of Atlantic, was the speaker of the evening, November 2, when the local Lions Club met for its regular weekly meeting. Dr. Montgomery briefly reviewed early sanitation practices, and discussed present methods of control of diseases and plagues.

MARRIAGES

Miss Helen Elizabeth Chick and Dr. A. Trevenning Harris, both of Sioux City, were married November 4, at the home of the bride's mother in Hastings, Nebraska. They will be at home in Sioux City, where Dr. Harris is just opening an office, coming from Hastings, Nebraska, where he was previously engaged in the practice of medicine.

DEATH NOTICES

Edgerly, Edward Tyler, of Ottumwa, died November 13, at the age of sixty-seven as the result of complications following an operation. He was graduated in 1889 from the Northwestern University Medical School, and at the time of his death was a member of the Wapello County Medical Society.

Gross, David L., of Glenwood, died November 5, at the age of twenty-six from heart disease. He was graduated in 1929 from Creighton University School of Medicine, and at the time of his death was a member of the Mills County Medical Society.

Hansen, Andreas Schantz, of Cedar Falls, died October 25, at the age of seventy-two as the result of a stroke of apoplexy. He was graduated in 1893 from the State University of Iowa College of Homeopathy and had long been a member of the Black Hawk County Medical Society.

Higley, Denison J., of Grandview, died November 24, at the age of seventy-eight as the result of bronchopneumonia. He was graduated in 1882 from the University of Michigan Medical School and was a member of the Louisa County Medical Society until his retirement seven years ago.

Kester, George Wesley, of Grand Junction, died November 4, at the age of sixty-two, as the result of a long illness. He was graduated in 1895 from Drake University College of Medicine and at the time of his death was a member of the Greene County Medical Society.

Kime, Sarah A., of Fort Dodge, died October 30, at the age of seventy-three, after an illness of several years' duration. She was graduated in 1882 from the State University of Iowa College of Medicine and had long been a member of the Webster County Medical Society.

Inez Patterson Brown, wife of Dr. Gates M. Brown of Dayton, died November 2, at the age of fifty-five. Burial was at Ames with the Eastern Star conducting the services.

NEW AND NON-OFFICIAL REMEDIES

The following article has been exempted and included with the List of Exempted Medicinal Articles (New and Nonofficial Remedies, 1931, p. 477):

Lederle Laboratories, Inc.
- Ferric Ammonium Citrate-Lederle capsules, 0.5 Gm.

Lederle Laboratories, Inc.
- Diphtheria Toxin-Antitoxin Mixture, (0.1 L+) 3 syringe packages.
- Pollen Antigens-Lederle, Series D packages.
- Prostrate Pigweed Pollen Antigen-Lederle.
- Summer Cypress Pollen Antigen-Lederle.
- Thromboplastin Local-Lederle.

H. K. Mulford Co.
- Tuberculin Intracutaneous (Human Type) 3 cc. vial packages.
- Tuberculin Intracutaneous (Bovine Type) 3 cc. vial packages.

History of Medicine in Iowa

Edited by the Historical Committee

Dr. William Jepson, Sioux City
Dr. Arthur D. Woods, State Center
Dr. Frank M. Fuller, Keokuk
Dr. Walter L. Bierring, Des Moines
Dr. John T. McClintock, Iowa City

Pioneer Physicians of Iowa County

E. N. Brown, M.D. (Univ. Ia. '88)
Marengo, Iowa

It is not the intention in this article to even name all the physicians who have lived within the borders of Iowa county, but rather to mention only briefly some of the doctors who were active in the practice of medicine for a number of years in the first half century of the county's history. Lack of proper knowledge, sufficient time and necessary space has excluded the mention of many who should be included in a more extended review of the profession.

Iowa county had a population of 435 in 1847. Probably some of the young arrivals before that date were not welcomed by physicians and also that some who departed this life were not assisted by medical men. Prior to 1847 there were no physicians in the county. The nearest physicians were at Iowa City. A trip to Iowa City and return in those days was not a two-hour pleasure jaunt, but owing to the means of travel and the condition of the roads, or rather the lack of roads and bridges, it was a hazardous two days' journey.

Believed to Be First Physician

Early history mentions a Dr. Layman Frost who attempted to lay out Marengo without a compass in 1846.

A Dr. Crawford attended the first Independence Day celebration held in Iowa county near Marengo in 1847. A Dr. Wallace is mentioned in 1850. Little is known of these men.

We believe that Dr. E. C. Hendershot, who located in Marengo in 1847, was really the first physician of Iowa county He married Mary Bishop, Marengo's first school teacher, in 1851. Dr. Hendershot was a public spirited man and had much to do in the public affairs of Marengo's and Iowa county's early history. He was postmaster, justice of the peace and Marengo's first mayor. He was also Iowa county treasurer for two terms. He built the house known as the Dr. Eddy home, where he died in 1865.

Dr. J. W. Krant came to Marengo in 1851 and continued to practice here until 1881 when he removed to Texas.

Drs. Work, Worth, L. Alverson and W. H. McFall all came to Marengo in the '50's. Work and Worth did not practice long. Dr. Alverson conducted a drug store and removed to California about 1877. Dr. McFall removed first to Nebraska and later to Chicago where he died about 1901.

Dr. Bartlet, a graduate of Ohio State Medical College, came here at a very early date. He was much interested in horticulture and divided his energies between the practice of medicine and managing his fruit farm two miles north of Marengo. He died in Marengo in 1889.

Millersburg was the second town, both in size and importance in the first thirty years of Iowa county history. Millersburg was also the second town in the county to have a physician. Dr. H. B. Lynch located there in 1852 and practiced there until 1861 when he enlisted as sergeant in the 28th Iowa Infantry and died on the way home.

In 1854 Dr. John Bricker located at Genoa Bluff, a town which at that time aspired to be the county seat. As was common in those days, Dr. Bricker was not a graduate when he commenced practice, but his energy and disposition would not permit him to be content as an undergraduate. He was graduated from a New York college a few years later. Subsequently he located in Hartford township, two miles southwest of Ladora, where he acquired a fine farm of 640 acres, and continued to practice until his retirement in the later years of his life. Dr. Bricker was a man of jovial disposition and greatly enjoyed those years of retirement. One of his daily recreations was to drive his thoroughbred team to Ladora every morning to get his daily mail and cigar. He died in 1896 at the age of 65 years.

Koszta Physicians

Dr. H. P. Miller practiced at Koszta from 1857 until his death in 1861. Dr. H. C. Dodd located there in 1879 and continued in the practice there until the time of his death. Dr. Dodd had the sad misfortune to have his five children, (all the children of one family) die of diphtheria within a few weeks.

Dr. Henry Fehr came with the early Amana Society settlers in 1857. He was their only doctor for several years. He died in 1877 at the age of 45 years.

But Few Were Graduates

Few of these early pioneers of the '40's and '50's were medical college graduates. Most of them had one year of school preceded or followed by study and practical experience in a doctor's office. They knew little of the conditions which are but little menace to life but to which we attach high sounding, awe-inspiring names today. But they DID know about ague, dysentery, cholera infantum, diphtheria, typhoid and lung fever—the things that leave a trail of deaths and sorrows in their wake. They treated these with marked success, considering the limited medical knowledge of those early days.

After 1860 medical graduates came in. We believe Dr. J. S. Watts was the first, or at least one of the first two medical graduates to practice in Iowa county. Dr. Watts was graduated from the Sterling Medical College of Ohio in 1854. He was associated with his uncle, Dr. Vest, of Montezuma, a few years, and then located at Millersburg in 1860. Dr. Watts also was graduated from the Jefferson Medical College of Philadelphia, one of the very best colleges of this country, in 1867. This gave him the distinction of being the only physician in the community at that time, who held diplomas from two medical colleges. For many years he was considered by his colleagues as the head of the Iowa county medical profession. Dr. Watts had a keen intellect and was not only a well qualified physician but also had a good general education and possessed a large fund of general information which he used in the educational uplift of his community.

Dr. Watts Had High Integrity

He was a man of high order of integrity, of unquestionable character, and was kind, sympathetic and generous almost to a fault. He attended the Civil war soldiers' families without charge during the first three years of the war, but owing to the excessive frequency of the calls on his kind benevolence he was compelled to charge a self-protective tariff of one-half price during the latter part of the war.

Dr. Watts enjoyed a very extensive practice which included a large part of the work of English, Dayton, Lincoln, Pilot, southwest Troy and Fillmore townships and also a large strip on the north part of Keokuk county and east part of Poweshiek county. He was called in consultation to Marengo, Williamsburg, Keota, Sigourney, What Cheer, Montezuma and the smaller towns within this circle.

In this extensive work he required assistance which he secured by means of partners. The first of these was Dr. E. S. Athem, who in later years practiced at North English. Dr. H. O. Bates, a man also with diplomas from two schools, was associated with Dr. Watts from 1872 to about 1884, when Dr. Bates went to Chicago. Dr. S. A. Walker was a partner from 1885 to about 1890 when ill health compelled him to give up the work. Dr. Hugh Conroy was the next associate from 1891 to about 1898, when Dr. Conroy moved to Ottumwa and later to Los Angeles, California.

Son Follows Footsteps

Dr. R. F. Watts, son of Dr. J. S., was with his father the last few years of his father's life and remained at Millersburg a few years after his father's death, when he removed to Des Moines, where he died in 1929. It was considered a compliment and an honor to be associated with Dr. J. S. Watts in practice. Dr. Watts continued in very active practice until his last short sickness. In fact he rode in his buggy supported by pillows to see patients almost to the day of his death.

In his passing his wife lost a devoted husband, his children a kind, indulgent father, the community, a faithful, charitable servant, the profession an ideal member, the county, one of its most esteemed citizens and a Christian gentleman.

In the writer's opinion Dr. Watts did more hard physical work and went through more anxiety and mental worry than any other man who has lived in Iowa county.

A Marengo Doctor

Dr. W. M. Eddy located in Marengo in 1865, and formed a partnership with Dr. Nye, who married Miss Rhoda Gardner and in a few years moved to western Iowa. Dr. Eddy continued to practice medicine until the late years of his life, when ill health incapacitated him from further professional service. Dr. Eddy possessed one of the very keenest intellects it has been the writer's pleasure to meet and was a lifelong medical student. By his own efforts, unassisted and untaught, he worked out some of the difficult problems that had come into the profession after the time of his graduation. The writer was in consultation when he used the first diphtheria antitoxin used in the county. It took courage to do this at that time, since a young lady had died suddenly only a few minutes after its use (probably improperly administered), at Fairfield only a few weeks before. Dr. Eddy was a member of the Marengo school board many years and often successfully conducted high school recitations. He died at Marengo.

Dr. W. C. Schultze was graduated from the Bellevue Hospital Medical College, one of our most prominent medical schools, in 1867 and soon after located in Marengo. Dr. Schultze was a scholarly man and was the only physician in the county at that early date who had a college degree before he commenced his medical studies. He enjoyed an extensive practice during his forty years of active work here. His son, Dr. F. P., was associated with him the last few years of his work. He retired from active practice in 1907 at the age of 72 and removed to Oregon, where he conducted a fruit ranch. He died in 1921 at the age of 87 years. His son, Dr. F. P., remained here a few years, then removed to Winterset and from there to Ft. Dodge and then to Portland, Oregon, where he died in May this year at the age of 54 years.

Came Here After War

Dr. W. L. Huston studied at Jefferson Medical College, served four years in the Federal Army and located at Marengo soon after the close of the Civil war. He formed a partnership with Dr. Grant and did an active practice for many years. Later his health weakened but he continued in the work until his death in 1904.

Dr. D. C. Brockman was graduated from the State University in 1878 and soon located in Marengo. At that time Dr. Huston was in failing health and Dr. Brockman soon gained an extensive practice. Dr. Brockman was a college graduate before studying medicine and was of a scientific turn of mind and a hard student. He availed himself of every opportunity to increase his medical knowledge. He wrote many papers for medical society meetings and was an assistant instructor in the State University for a short time. He took a post graduate course at New York City in 1890 and spent several weeks every year in the hospitals of different cities.

Dr. Brockman moved to Ottumwa in 1892 where he became one of the leading surgeons of the southern part of the state and one of the first hundred men in the profession of the state. He stood high in the councils of the medical profession of the state and was honored by being elected president of the State Medical Society, the highest honor that can be conferred by the profession of the state. He died in Ottumwa in 1925, at the age of 72 years. In his death the profession of the state lost one of its strong members.

Dr. E. B. Henderson came to Marengo soon after graduating from the State University in 1897. He was a very pleasant, agreeable gentleman and soon had a host of friends and a large practice. He was very attentive to the calls of his profession and was a good business man. He died from an apoplectic attack when on his way from his office to his home after making a night call in March, 1916.

He had typhoid fever a few years before at which time Bright's disease developed. He was well aware of his condition and talked calmly with those near him of his impending fate and had made complete plans for this sudden call. His death was a shock to his many friends in the community but not unexpected by those near him. He was active in the various social, educational and religious activities of the community.

Dr. C. L. Winzenried, a member of the Amana Society, was graduated from Rush Medical College of Chicago, in 1866 and located at Amana and continued to practice there until his death in 1914. Dr. Winzenried and Dr. Fehr, before mentioned, did most of the work of the society until 1881, when Dr. C. H. Hermann was graduated from the State University and located at Middle Amana. Dr. Hermann continued in active practice until near his death in 1922, aged 72 years. His son has taken his place. Dr. Wm. Moershel was graduated from the State University in 1888 and practiced medicine at Homestead until incapacitated by ill health. His son, Dr. Henry Moershel, is now doing the work. Dr. C. F. Noe was graduated in 1898 and since then has been doing the work at Amana. His son is now assisting. These Amana Society physicians have all had the advantage of a thorough medical education and do all the work of the society and adjacent territory.

Dr. D. B. Darr studied medicine with Dr. Bricker and was graduated from Rush Medical College in 1872. He located in Ladora where he conducted a drug store and practiced until his sudden death in 1886. Dr. J. L. Augustine was graduated from Iowa University in 1893 and soon after located at Ladora where he is now in active practice.

Victor

The towns of Victor and Ladora were not established until after the railroad was extended west from Marengo in 1862. Dr. W. W. Orris located in Victor about 1865 and continued in practice there until about 1890 when he removed to Des Moines, where he later died. Dr. Orris was joined in practice with Dr. J. M. Dunlap in 1875. Dr. Dunlap continued in practice at Victor until a very old man. He died there in 1927 at the age of 92 years. Dr. I. M. Huston first practiced in Iowa county at Lytle City, 1861 to 1864, where he was appointed assistant surgeon of Eighth Iowa Infantry. In 1866 he located in Victor and continued to practice there until his death about 1884. Dr. D. W. Phillips was graduated from Columbus Medical College in 1885. He located in Victor in 1886 and except for a short interval has continued in practice there since.

Williamsburg and North English were very small villages prior to the time of the Milwaukee road in 1884. Parnell was represented by Lytle City, where Dr. Geo. Welch, a graduate of the University of Michigan, located in 1874. Dr. Welch was also graduated from the University of New York in 1880 and soon after went to Aberdeen, S. D. Dr. T. J. Shuell was graduated from the University of Iowa in 1880 and commenced practice at Lytle City and when Parnell was established he moved there and continued to practice there until about 1920, when he removed to Cedar Rapids, where he died about 1921. Dr. Shuell was also a college graduate before he studied medicine and was an able public speaker.

Williamsburg

Dr. J. E. Jones, a graduate of Rush Medical College, located at Williamsburg in 1871, when the burg was a village of about 100 people. He continued to practice there until about 1891 when he went to DeSoto, Mo. He was considered a well qualified physician by his colleagues. Dr. A. C. Moon a graduate of S. U. I., came to Williamsburg in 1884, the year the Milwaukee road was completed. Williamsburg was a rapidly growing town. Dr. Moon was an affable, pleasant man and soon had a large practice. He continued in practice until about 1920, when he moved to Cedar Rapids. Dr. E. C. Long was graduated from the University of Louisville, Ky.,

and located at Williamsburg in 1888, and continued in active practice there until a few years ago when he moved to Arizona, where he died in 1930.

North English

Dr. Arter was at North English during the Civil war times. Dr. A. T. Doll located there about 1865 and remained there until the time of his death some time in the '80's. Dr. Cameron was an early doctor at North English and died there in 1875. After the Milwaukee road was built Dr. Bates, who was associated with Dr. Watts, was there for a few years and removed to Chicago. Dr. Athem, who also had been with Dr. Watts in the '60's came to North English, but after several years went to Kansas. Dr. Baughman came from Wellman and continued in practice until his death about 1900. Dr. B. Harrington was graduated from S. U. I. in 1897, took some post graduate work in London and located in North English in 1898. He moved to Des Moines about 1918 and later to Cedar Rapids. Dr. J. R. Coxe was graduated from S. U. I., practiced in Benton county and Parnell and then located at North English and is still doing work.

The year 1900 is the limit set since we were to look up only the earlier physicians. Many have come and gone since then and other new men are here. These younger men possibly feel that we older fellows are approaching our dotage. Some of us older fellows admit that we do not retain as well as we did 40 years ago, but contend that no one has a monopoly on medicinal knowledge.

OBITUARIES

EDWARD TYLER EDGERLY, A.B. M.D., F.A.C.P.
1864-1931

An Appreciation

Dr. Edward Tyler Edgerly died following an operation for vesical calculus, at Rochester, Minnesota, on November 13, 1931, at the age of 67 years.

Dr. Edgerly was born in Ottumwa, January 15, 1864. After attending the Ottumwa Public Schools he was graduated from Phillips Exeter Academy and from there went to Harvard University, receiving his A.B. degree in 1885. He was graduated in medicine in 1889 from Chicago Medical College, now the Medical Department of Northwestern University. In the competitive Cook County Hospital (Chicago) Interne examination he received the highest grade and was appointed chief of the Resident Interne Hospital. After completing his interne service he was appointed Instructor in Medicine and Physical Diagnosis at his Alma Mater.

In 1894 on the death of his father, who was at that time head of the wholesale drug firm of J. W. Edgerly & Co., he came to Ottumwa to help in the management of the business. After a term of years he resigned his position with the company and entered the practice of his profession in Ottumwa. His preeminent mental endowments and fine training soon made him a leader among the physicians of southern Iowa.

In 1912 he was commissioned First Lieutenant in the Medical Reserve Corps, U. S. A. and entered active service soon after the declaration of war. He served as Captain and Major and was chief of the Medical Section of Camp Dodge during the war.

At the time of his death he was a member of the Wapello County Medical Society, Iowa State Medical Society (past chairman of Section of Medicine),



American Medical Association, Iowa Clinical Medical Society (past president), and a Fellow of the American College of Physicians. He was the Medical Director of Sunnyslope Sanatorium for Tuberculosis.

Dr. Edgerly was married in 1891 to Miss Nettie Thurston in Chicago, who with a son, John T. Edgerly of Birmingham, Michigan, and a daughter, Mrs. Nelson Rupe of Cleveland, Ohio, and four grandchildren, survive.

Dr. Edgerly was a man of unusual ability and judgment and kept himself well informed on all matters pertaining to his profession. His was a kindly and generous personality winning the esteem and affection of those who knew him.

Murdock Bannister, M.D.

Doctor Edgerly was commissioned a medical officer early in the World War and stationed at Camp Dodge. Although nearing the maximum age limit, he made a splendid record of military service. He was sent to the Base Hospital and was soon promoted to the rank of major, and placed in charge of con-

tagious diseases. Later he was made assistant chief and eventually chief of the medical service. His trained clinical sense and keen judgment admirably fitted him for this important post, which he filled with fine credit to himself and his profession.

On returning to his medical practice in Ottumwa, many honors came to him, among which were, President of the Iowa Clinical Medical Society, Chairman of the Medical Section of the Iowa State Medical Society, Fellow of the American College of Physicians and others.

He developed a particular interest in tuberculosis during his army service and upon his return home, became associate physician to Sunnyslope Sanatorium and later was appointed Medical Director. He was a keen student of the causes and treatment of tuberculosis, and especially interested in the human side of the disease. He was universally beloved by the patients and the staff of the Sanatorium where he gave so many valuable hours of his time. He was a leader in the chest clinics in his county, which were an important part of the case finding procedure in tuberculosis.

Doctor Edgerly was an active member of the Iowa Sanatorium Association and a regular contributor to its scientific meetings. He was a member of the executive committee of the Iowa Tuberculosis Association and a faithful attendant at annual sessions. He will be sadly missed in medical circles and in the special field of tuberculosis the loss is irreparable.

John H. Peck, M.D.

My first meeting with Doctor Edgerly was in the early spring of 1894 while passing through Chicago on the way to Paris for a period of study at the Pastuer Institute. He was then instructor in medicine and physical diagnosis at Northwestern University Medical School with every indication of going far in the field of medical teaching and professional recognition in the city of Chicago.

During the following summer he made an extended visit to the larger European medical centers, being accompanied by his father, Mr. J. W. Edgerly. The latter was one of the leading citizens of Ottumwa, Iowa, president of the First National Bank, and the Edgerly Wholesale Drug Company. In August of that year the travelers came to Paris, and we had several happy days together. Mr. Edgerly was an interesting character and keen observer, being a Harvard graduate and classmate of Reverend Philip Brooks. After a strenuous day of sight seeing, he suffered a cerebral hemorrhage and died within a few hours at his hotel in Paris. It was my privilege to be of some assistance to his son during this trying period.

This unfortunate occurrence changed the course of Doctor Edgerly's career. To preserve the family fortunes, he cheerfully sacrificed a promising medical future in Chicago in order to devote himself to the various business interests of the Edgerly estate in Ottumwa. He became treasurer of the J. W. Edgerly & Company on January 1, 1895, and served in the active management of the firm until 1908, when he returned to his old love, and entered into active practice in his home city. Iowa medicine was the gainer thereby and his leadership has been recognized ever since in advancing scientific medicine in our state.

Another personal incident may be of interest. In April, 1929, while attending in Boston the annual session of the American College of Physicians of which Doctor Edgerly was a Fellow, a dinner was given in his honor by his classmates of Harvard (Liberal Arts 1885). Through the kindness of one of them, Dr. Horace D. Arnold, I was included as a guest. The dinner company was a distinguished group of men prominent in the professions and public affairs. The head of the table was graced by Mr. Roland W. Boyden, whose recent death while attending Sunday services in Boston, brought forth editorials in the leading dailies regarding his eminence in the field of international economic relations and international law. When Mr. Charles H. Hughes resigned from the World's Court at The Hague last year to become Chief Justice of the United States, President Hoover selected Mr. Roland W. Boyden as his successor. His brother, Mr. William W. Boyden, a leader of the Chicago Bar was also present. The president of one of America's largest life insurance companies was at the dinner and others of equal prominence. Greetings were read from Dr. W. S. Thayer, of Baltimore, and Associate Justice Edward T. Sanford, of the United States Supreme Court. It was pleasing to note that old classmates had the same affection and regard for our friend that we felt for him at home.

We will miss Doctor Edgerly in all our councils and the impression of his fine spirit, generous nature, and high professional ideals will linger with us while memory lasts.

Walter L. Bierring, M.D.

OSCAR WILLIAM LOWERY, M.D.*
(1845-1931)

With the death of Doctor Oscar W. Lowery the medical profession has suffered the loss of an esteemed colleague and the community a worthy, patriotic citizen. He was the oldest practicing physician in the state; and four years ago at the Iowa State Medical Society meeting was voted the award for the greatest number of years of active practice.

Doctor Lowery was born in Lee County, Iowa, on April 22, 1845, being in his eighty-seventh year at the time of his death, and never having lived outside of Iowa.

With two brothers he served in the 6th Iowa Infantry during the Civil War, the family being thus represented in this regiment throughout the entire period of hostilities. He sustained a gun shot wound of the shoulder in the Battle of Shiloh but insisted on remaining with his regiment and participated in

* Reprinted from the November issue of The Bulletin of the Des Moines Academy of Medicine and the Polk County Medical Society.

Sherman's campaign and his famous march to the sea.

After the close of the war he attended Penn College at Oskaloosa, and later read medicine. He began practicing in 1870, more than ten years before the enactment of the first medical practice act in Iowa.

He was graduated from the College of Physicians and Surgeons, at Keokuk, in 1873, and soon after located in Grand Junction, Iowa, where he continued in active practice until he moved to Des Moines in 1910. He had been an active member of medical societies since the organization of the Central District Society, in 1873, of which he and the late Doctors Louis Schooler and David S. Fairchild were charter members.

He was an emeritus member of the Des Moines Academy of Medicine and Polk County Medical Society.

Notwithstanding his advanced age he maintained a lively interest in scientific medicine and was a frequent attendant at the early Friday morning clinics at Broadlawns Hospital. Only about two weeks before his death he attended a meeting of the Des Moines Academy of Medicine and Polk County Medical Society at the Smouse School for Handicapped Children and evinced a keen appreciation of its appointments.

Doctor Lowery was commander of Crocker Post of the G. A. R., and served the last four terms of the Iowa Senate as chief doorkeeper in which capacities he revealed that courteous consideration for others, but withal, that firm conviction of justice which marked his medical career.

During his early life he suffered a rheumatic mitral disease which, aside from occasional transient attacks of palpitation, gave him little trouble until myocardial failures developed suddenly about ten days before his death. He bore his affliction with that rare fortitude which marked his life and maintained a clear intellect until the last.

WILLIAM E. SANDERS, M.D.

DR. M. A. ARMSTRONG, OF NEWELL, MEMBER OF NOMINATING COMMITTEE

Dr. M. A. Armstrong of Newell was a member of the nominating committee for the eleventh district at the annual session held in Des Moines, May, 1931. This statement is made to correct the erroneous report printed on page 406 of the July, 1931, Journal.

SHOULD COD LIVER OIL BE FLAVORED?

It is a well-known fact that young infants shy at aromatics. Older patients often tire of flavored medications to the point where the flavoring itself becomes repellant. This is particularly true if the flavoring is of a volatile nature or "repeats" hours after being ingested. Physicians have frequently used the terms "fresh," "natural," "sweet," and "nut-like" in commenting upon pure cod liver oil. They find that most patients prefer an unflavored oil when it is pure.

Physicians who look with disfavor upon self-medication by laymen are interested to know that Mead's is a standardized pure cod liver oil, and one that is not advertised to the public and that carries no dosage directions on carton, bottle or circular.

PENNSYLVANIA'S COMMITTEE ON PUBLIC RELATIONS

In a recent issue of the Pennsylvania *Medical Journal* there is an announcement that a Committee on Public Relations fashioned after a like committee of the New York State Society has been authorized by the House of Delegates of the Pennsylvania State Medical Society.

It was pointed out that such a committee was required to promote healthy relations between the members of the organized medical profession in Pennsylvania and certain health agencies including the State Department of Health and the State Nursing Board. After considerable debate the House decided that the existing Commission to Confer with Private and Governmental Health Agencies should become a permanent or standing committee, and that the subject of coordination between the Society and the State Department of Health should become one of its principal activities.

As a result of the activities and overtures the Pennsylvania State Medical Society and the Pennsylvania Dental Society have appointed a committee of public relations, which will work with the committee of the medical society in furthering various health knowledge.

A NEW ADDRESS FOR NATIONAL HEALTH PROMOTION ORGANIZATIONS

Announcement has been made that the following health promotion organizations will maintain offices in the Nelson Tower Building, 450 Seventh Avenue, New York:

The National Health Council, including the:
- American Child Health Association
- American Heart Association
- American Public Health Association
- American Social Hygiene Association
- National Committee for Mental Hygiene
- National Organization for Public Health Nursing
- National Society for the Prevention of Blindness
- National Tuberculosis Association
- Foundation for Positive Health

The National Social Work Council, (a cooperative group of twenty-two national social agencies).

The American Journal of Nursing

The American Nurses' Association

The Committee on Grading of Nursing Schools

The National Health Circle for Colored People

The National Amateur Athletic Federation (Women's Div.)

The National League of Nursing Education

The National Probation Association

The New York State Nurses' Association

THE JOURNAL BOOK SHELF

BOOKS RECEIVED

*BEDSIDE INTERPRETATION OF LABORATORY FINDINGS —By Michael G. Wohl, M.D., Associate Professor of Experimental Medicine, Temple University Medical School, Philadelphia.—With an Introduction by Joseph McFarland, M.D., Sc.D., Professor of Pathology, University of Pennsylvania.—Illustrated.—C. V. Mosby Co., St. Louis, 1931.—Price, $6.00.

*COLLECTED PAPERS OF THE MAYO CLINIC AND THE MAYO FOUNDATION FOR 1930.—Volume xxii.—Edited by Mrs. Maud H. Mellish-Wilson, Richard M. Hewitt, B.A., M.A., M.D., and Mildred R. Felker, B.S.—Octavo volume of 1125 pages with 234 illustrations.—W. B. Saunders Company, Philadelphia and London, 1931.—Price, $13.00.

*DR. COLWELL'S DAILY LOG FOR PHYSICIANS FOR 1932. —Being a brief, simple, accurate, financial record for the physician's desk.—Published by Colwell Publishing Company, Champaign, Illinois.

*FAWCETT'S PROFESSIONAL APPOINTMENT BOOK FOR 1932.—Published by J. C. and A. L. Fawcett, 412 Fulton Street, Brooklyn, New York.—Price postpaid, $1.50 in eastern states, $1.75 in western states.

*HEALTH ON THE FARM AND IN THE VILLAGE.—By C. E. A. Winslow, Dr.P.H., Professor of Public Health, Yale School of Medicine.—281 pages, illustrated.—The Macmillan Company, New York, 1931.—Price, $1.00.

*PREPARATION OF SCIENTIFIC AND TECHNICAL PAPERS.—By Sam F. Trelease, Professor of Botany in Columbia University, and Emma Sarepta Yule, Head of the Department of English, College of Agriculture of the University of the Philippines.—117 pages.—The Williams & Wilkins Company, Baltimore, 1930.

PROCTOSCOPIC EXAMINATION AND THE TREATMENT OF HEMORRHOIDS AND ANAL PRURITUS.—By Louis A. Buie, B.A., M.D., F.A.C.S., Associate Professor of Surgery, The Mayo Foundation, University of Minnesota.—178 pages with 72 illustrations.—W. B. Saunders Company, Philadelphia and London, 1931.—Price, $3.50.

SURGICAL CLINICS OF NORTH AMERICA (New York Number—June, 1931)—Volume xi, No. 3—239 pages with 73 illustrations.—(Issued serially, one number every other month.)—Per clinic year (February, 1931 to December, 1931) paper, $12.00; cloth, $16.00.—W. B. Saunders Company, Philadelphia and London, 1931.

Review appears in this issue.

BOOK REVIEWS

BEDSIDE INTERPRETATION OF LABORATORY FINDINGS

By Michael G. Wohl, M.D., Associate Professor of Experimental Medicine, Temple University Medical School, Philadelphia.—With an Introduction by Joseph McFarland, M.D., Sc.D., Professor of Pathology, University of Pennsylvania.—Illustrated.—C. V. Mosby Co., St. Louis, 1931.—Price, $6.00.

A casual inspection of this volume might lead to the erroneous assumption that this is merely another laboratory manual for the guidance of physicians and technicians. However, a more careful review of the volume indicates that it has been planned and written from quite another viewpoint. It is the author's effort to correlate laboratory findings with bedside examination and while the simpler and more usual laboratory methods are outlined, chief stress is laid upon the interpretation of the findings obtainable by these methods. In his analysis the author stresses the limitations of laboratory procedures and the attitudes to be taken by physicians where laboratory findings disagree with the clinical facts. He stresses that, "the laboratory is a valuable adjunct, but excessive devotion to it may be almost as bad as making no use of it at all."

A book offering detailed and specific information upon the proper use of the clinical laboratory is, indeed, timely and one which will be appreciated by every older physician by whom a knowledge of many laboratory procedures has been gained solely from laboratory tests. Every physician, however, will find the discussion of these matters of extreme importance in his daily practice and for this reason this volume should prove a valuable reference work.

PREPARATION OF SCIENTIFIC AND TECHNICAL PAPERS

By Sam F. Trelease, Professor of Botany in Columbia University, and Emma Sarepta Yule, Head of the Department of English, College of Agriculture of the University of the Philippines.—117 pages.—The Williams & Wilkins Company, Baltimore, 1930.

Prepared for the use of writers of technical papers, this small and concise volume should be invaluable to physicians who find it an arduous task to put into effective form the results of their research. Too often the scientific value of a paper is obscured by poor organization, by incomplete or too verbose presentation, or by inaccurate or faulty diction. This may not be due so much to the lack of a natural gift for facile writing, as to a want of knowledge of the actual mechanics of scientific composition.

Dr. Trelease and Miss Yule give us complete and explicit instruction in these mechanics. Their text is not intended exclusively for the medical profession, but for all writers of technical papers. For this reason its scope is somewhat broader than that of similar volumes written solely for physicians, but all of the information given is applicable to medical writing. Particularly helpful is the opening chapter on "First Steps in Treating Scientific Data," which solves for authors the perplexing problem of where to begin; as well as the chapter on "Plan and Order of Topics," with general outlines for various types of scientific articles. The chapter on "Tables" gives in detail methods of interpreting data in tabular form and valuable suggestions as to the amount and type of material to be included in different kinds of tables, with samples of each. Equally instructive are direc-

tions, in a later chapter, for preparing drawings, graphs and photographs.

So well arranged, so graphic in presentation, and so shorn of verbiage is this text, that it is excellently adapted to constant use as a reference for the physician who would by more careful writing insure his readers' clearer understanding of his theories or discoveries.

HEALTH ON THE FARM AND IN THE VILLAGE

By C.-E. A. Winslow, Dr. P.H., Professor of Public Health, Yale School of Medicine. 281 pages, illustrated The Macmillan Company, New York, 1931. Price, $1.00.

This volume presents a survey conducted under the Milbank Memorial Fund begun in the fall of 1929 and reflects the experience of the Cattaraugus County Health Demonstrations.

Since the problem of rural health is one of acute interest in every locality, the results of this investigation will be of interest to every physician, particularly those engaged in public health work. The report covers the developument of the health program in this county, comparing it with that effected in other rural communities. He discusses various public health activities, including the control of tuberculosis, the hygiene of maternity, infancy and childhood, social service work and public health nursing, and in a concluding chapter sets forth in detail the costs involved in such a program.

The text contains several half-tone illustrations, numerous tables and charts.

DR. COLWELL'S DAILY LOG FOR PHYSICIANS FOR 1932

Being a brief, simple, accurate financial record for the physician's desk. Published by Colwell Publishing Company, Champaign, Illinois.

In preparing the Daily Log for 1932 the authors have incorporated some revisions which will make this account book of greater benefit. The body of the book remains the same as for previous years, containing some four hundred pages and providing a separate page for each day of the year, with extra spaces for monthly and annual summaries, expense tables, special records, and incidental memoranda. The large size of the page permits sufficient room for the patient's name, the service rendered, and the financial account accompanying the transaction. For the physician seeing less than thirty-two patients per day, more than one line may be devoted to the patient, permitting a record of the address, the nature of the illness, the form of treatment employed, or the prescription written. For the physician making office appointments the book will serve jointly as an appointment book and ledger, since a column is provided on each page for the hour. Those physicians already familiar with the book will be pleased to note that among the new features for this year are a new page for a record of innoculations, a calendar page conveniently located in the front of the book, and a page of illustrated forms which will assist materially in securing the full benefit of this carefully prepared volume. The system is built on a loose-leaf plan and durably bound in fabricoid.

FAWCETT'S PROFESSIONAL APPOINTMENT BOOK FOR 1932

Published by J. C. and A. L. Fawcett, 412 Fulton Street, Brooklyn, New York. Price postpaid, $1.50 in eastern states, $1.75 in western states.

This appointment book allows space for appointments every half-hour from 8:00 A. M. until 9:00 P. M., daily, including Sunday throughout the year. Columns are ruled for listing charges for services and payments received. At the bottom of each page several lines are left blank for notes. Towards the end of the book, pages are arranged for a monthly summary covering the ordinary items of office expense as well as all items of income. The summary of each month may be readily carried to a yearly summary on pages ruled especially for this purpose. The book is of convenient size and is handsomely bound.

For the physician who conducts his work upon the appointment plan, the book would seem admirably suited to its purpose. Many physicians, particularly those in general practice will perhaps require more space for their entries than is provided on the day's page (thirty lines) if progress notes, prescriptions, etc., are recorded. As a day book of accounts, it will adequately serve even the busiest physician.

COLLECTED PAPERS OF THE MAYO CLINIC AND THE MAYO FOUNDATION FOR 1930

Volume xxii.—Edited by Mrs. Maud H. Mellish-Wilson, Richard M. Hewitt, B.A., M.A., M.D., and Mildred A. Felker B.S.—Octavo Volume of 1125 pages with 234 illustrations.—W. B. Saunders Company Philadelphia and London, 1931.—Price, $13.00.

This volume contains eighty-five articles prepared by the staff of the Mayo Clinic reproduced in full, together with thirty additional articles which have been abridged and fifty-five articles which have been abstracted. The total papers written by the personnel of the Clinic for this number were four hundred eighty-two.

In selecting cases for inclusion in this volume the editors have attempted to choose those which would be of greatest interest and value to physicians doing general practice or combining general practice with general surgery. They have further attempted to cover a very wide scope so that each specialty may be adequately represented by papers of general interest.

The volume is well illustrated and in every way maintains the high standard which has been established in the past in these publications. To carefully read and digest this volume is in itself an admirable post-graduate course in medicine.

41B
164

